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The Manchester School

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REVIEWS

The Editorial Board welcomes contributions, especially from graduates of the Victoria University, who by virtue of their positions in business and the professions, are capable of making valuable contributions to economic literature.

Matter intended for publication should be sent to *The Editors*, THE MANCHESTER SCHOOL, *Department of Economics, The University, Manchester*, 13.

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Obituary

Edwin Cannan died on April 8th, 1935. It is with deep regret and sense of loss that those responsible for this Journal record the event. From its inception he had taken an interest in the progress of the Journal and, some time ago, promised a contribution to its pages. This promise is redeemed in this issue and everyone will agree that the contribution is typical of the man and his work.

His association with Manchester was not only intellectual and through personal friendship ; it was also filial. Only a few days before his death he sent the original MS. of a paper on Trade Unions, written by his father, when he was resident in the area, and read to a group of young men in Manchester in 1851. Remembering the date, the argument of the paper is strongly in support of Trade Unions and the son, thinking it unlikely that there would be another economist in the family to preserve the paper, hoped that some Manchester institution would accept it. The paper will be preserved in the Unwin section of the library of the Department of Economics.

Of his work as an economist and of his intellectual relationship to the historical Manchester School, this is not the time or place to speak. It may, however, be permissible for members of this Department of Economics to express their view that the most effective way of dissolving the clouds which at present overhang the world would be to subject them to some small rays of that wit and sanity which found abundant expression in his writings. An earlier indication of how his work is regarded at Manchester is given in the fact that, in 1927, he was made an honorary graduate of the University with the degree of Litt.D.

GROWTH AND FLUCTUATIONS OF BANKERS' LIABILITIES TO CUSTOMERS

THOUGH he would admit that it is everyone's interest to keep his credit-balance at his bank as low as possible, and even that it often pays to have a debit balance, the plain man has an impression that a big balance at the bank is rather a sign of prosperity. He is, therefore, a good deal puzzled by the fact that where sound development of banking has not been prevented by unusually stupid legislation, the aggregate of credit-balances is not much less in a time of deep depression than in a hectic boom. His perplexity would be still greater if he applied any of the best-known index numbers of prices to the nominal aggregates, and found, for example, as he would, that the effect of the application is to represent the purchasing power of the aggregate in England in 1932 as much greater than it was in the boom of 1920. The solution of the puzzle may, he thinks, perhaps be given in a two-volume treatise on money, or even in a book of only five hundred pages which professes to tell him all that everybody wants to know about money, but he fails to find it in the cursory search which is all he can persuade himself to make in those works.

My " plain man " is a person, I fear, of more than average intelligence and education. The mass of the people, being below his standard, know nothing of statistics of aggregate bank liabilities, but they do acquire a general impression that the banks have enormous quantities of money just when employment is worst and every person and institution outside the banks is extremely short of money. Naturally they think this is very wrong, and they are confirmed in their opinion when they gather vaguely that a whole group of exponents of monetary theory are constantly engaged in trying to convince bank directors that their policy is the one great cause of the depression.

It seems worth while therefore at the present juncture to put forward in the simplest possible terms a statement of the reasons why bankers' liabilities to their customers have grown to their

twentieth-century magnitude, and why they are subject to fluctuations as well as to secular growth.

"Why," I may be asked, "this jaw-breaking term, liabilities of bankers to their customers, instead of the usual word, deposits?" Because the suggestion conveyed by the word deposits is grossly misleading. Applied to a sealed bag of coins handed to a sixteenth-century goldsmith, who undertook to keep that particular bag of coins in his strong-box, and return it intact to his customer on demand, the term "deposit" was suggestive of what actually happened. But when the goldsmith became a banker instead of a mere custodian, and began to accept not a sealed bag but a sum of loose money, and undertook to return, not that particular set of coins, but only an equal amount of legal tender money, the nature of the transaction was fundamentally altered. Though tradition caused the goldsmith to be still spoken of as receiving a deposit, he was really accepting a loan from his customer. The continued application of the term deposits to the sums which bank customers lend to their banks misleads by suggesting that the banks *keep* something somewhere for the customers. Probably a great majority of Post Office Savings-Bank "depositors" imagine that their three hundred millions are safely kept for them by the Postmaster-General in vaults at St. Martin's-le-grand, or perhaps in the Savings Bank Offices in Blythe Road, West Kensington, W.14, and would be horror-struck if they were told that, in fact, the Government has spent all that they have "deposited" except the trifling amount, perhaps two or three pence in the pound, which may happen to be in the post-offices up and down the country. Even reputed monetary experts may be found who think of a bank deposit not as a loan which can be recalled by the lender and a debt which can be repaid by the borrower, but as a bit of indestructible matter, which, when taken out of a bank by a "depositor" must either be kept by him in his house or "re-deposited in the same or some other bank."

How difficult it is to dispel the confusion generated by the use of the term "bank deposits" is illustrated by the fact that I find myself sometimes held up to derision as a sort of High Priest of "Cloakroom Banking" because fourteen years ago I wrote an article on "Bank Deposits" in which I actually made a point of explaining that cloak rooms take deposits but banks take loans.

There is a ray of hope in the fact that the term seems to be losing ground in common language, which, in spite of the unfortunately contemptuous manner in which Adam Smith speaks of it, is generally

a much better language than the jargons which some of the economists of each age always love to propose as a substitute for it. The balance-sheets of the ordinary banks speak of liabilities on "current and deposit accounts" rather than of "deposits," and a customer of one of these banks says he has a "balance" of so much, not a "deposit" of so much at his bank. If he says he has some amount "on deposit," this is a technical term covering not the whole of what the bank owes him, but only a portion of it, with regard to which he and the bank have made some arrangement for the payment of interest by the bank and the giving of notice before withdrawal by the customer. People may still "deposit" money in Post Office and Trustee Savings-Banks and be savings-bank "depositors," but they "pay money into" the other banks, and are their "customers." This suggests that we are gradually getting nearer to a recognition of the fact that the use of the term is a pestilent anachronism already three hundred years out of date.

Of course the debts of banks to their customers, *alias* the loans which customers have made to their banks, differ from other loans in some respects, three of which are important :

Firstly, when an ordinary loan is about to be made, the prospective borrower takes the initiative, and asks the potential lender to lend him a definite sum which he intends to use in some particular way already in his mind. The banker, on the other hand, merely puts the word "Bank" somewhere on the front of his premises, and is thereby understood by everyone to proclaim that he is waiting behind his counter prepared to accept all the money offered to him, however much it may be.

Secondly, other borrowers sometimes find it desirable to repay their debts whether their creditors want to be repaid or not, but a banker who insisted on some or all of his customers removing their substantial balances would be promptly haled off to a mental hospital. To receive all that is offered is the banker's business, and he goes on doing it, however much he may profess to be at his wits end to know what to do with the money.

Thirdly, ordinary loans are contracted for definite periods or are recallable by the lender only after some definite substantial notice, whereas banks undertake to repay money on current account at any time in business hours, and also in practice waive the short notice nominally required for the withdrawal of money on deposit without exacting more than a trifling penalty (such as the loss of a week's interest) for the omission. They are, therefore, less able than other

debtors to forecast the repayments they will have to make, and this makes it more necessary for them to keep some reserve in hand or at call in order to meet contingencies.

These differences, however, do not prevent the debts of banks to their customers being just as real debts as the debts of their customers to each other, and if all loans of banks to customers were by way of fluctuating overdraft, " depositors " could be sharply distinguished, as lenders to the banks, from the borrowers from the banks. But side by side with the system of lending by allowing customers to overdraw (*i.e.*, have a debit balance on their current accounts), there exists a system of lending by fixed loans which allows a customer who is a debtor to the bank appear also as a " depositor." If Smith and Jones are ordinary persons, we never find a situation in which Smith has lent Jones £60 and Jones has lent Smith £10. But if Smith is a banker and Jones a customer, this situation is not at all unusual. Smith being Jones' banker may lend Jones £60 by writing up Jones' current account from nil to £60. Then for the moment Smith's liabilities will be written up by £60 in " deposits " and his assets by £60 in " advances to customers " ; if Jones proceeds to withdraw £50, his " deposit " will be reduced to £10.[1]

There is in this case no cancelling out ; when Jones has been credited with the loan by the bank and has so far left it untouched, he is held to be a " depositor " of £60, though his " deposit " of £60 is exactly wiped out by his debt to the bank of £60 ; and when he has taken out £50, he is held to be a " depositor " of only £10, and still to owe the bank the sum of £60. Consequently, the statistics of aggregate " deposits " always give figures which are somewhat in excess of the sum of the *net* amount owing by the banks to their customers. That the excess is " fictitious " or " mere water "—if these terms may be used without suggestion of malpractice—may be seen if we picture a Board of Directors anxious to make their bank appear the biggest giving their Chairman a loan of ten millions for December 31st only, with the understanding that he will let it

[1]Smith's balance-sheet will still balance, since (1) if Jones takes the £50 in cash, Smith's cash is reduced by that amount, (2) if Jones gives his cheque for £50 to someone who uses it to pay off a debt to Smith, Smith's advances are reduced by that amount, or (3) if Jones gives his cheque to someone who pays it in as an addition to his credit with Smith, Smith's liability to this customer is increased by £50 at the same time as his liability to Jones is diminished by that amount. It is wrong to assume that the third of these possibilities is the only one. The appearance of the new deposit is a mere coincidence with, not a consequence of the loan to Jones.

remain untouched and repay it first thing next morning, when it will have done its work of swelling the liabilities and assets in the end-of-the-year published balance-sheet. Of course, as an eminent bank officer said when I put this case to him, " no respectable bank would do such a thing," but that it is perfectly possible, however improbable, shows the hollow character of this portion of aggregate " deposits." As the existence of such " deposits " carries with it an extension of the term " depositors " to some customers who are on balance borrowers from their banks, and thus prevents the customers being divided at any moment into depositors on the one side and borrowers on the other, I shall find it convenient to use the unambiguous phrase " lender-customers " when I wish to speak of the customers whose credit-balances are not the result of loans from their banks.[1]

Next, if we are to consider increases and decreases, we must face the question of measurement. Money in banks is commonly reckoned, like all other money, in the conventional unit of account—the pound, franc, dollar, or whatever it may be. But these units are subject to changes of value. When they remain equal to a fixed and unchanged amount of some metal, they alter in value along with that metal, and even in modern times legislatures and dictators have little hesitation in altering the amount of metal to which they are kept equivalent. When they are divorced from any definite connection with a metal and are only cheaply-made tokens, their value varies with the will of the issuers to put many or few on the market. It is clear that we shall sometimes want to consider what Adam Smith would have called the " real " changes as opposed to changes in the " nominal " amount of money in the banks. If between two dates the value of the franc had fallen to one-fifth of what it was, and the number of francs in the banks had only been doubled, it would clearly be misleading to say without qualification that there was more in the banks than before. The " real " change would be a diminution of 60 per cent.

It is, no doubt, difficult to measure the changes of value suffered by a unit of account even between periods of very short duration, and the longer the period, the greater the difficulty. But for the purposes of the present inquiry, which concerns theory rather than

[1]The inclusion of some borrower-customers in " depositors " seems sometimes to cause a confusion of depositors with borrower-customers in which the existence of the lender-customers is ignored. The Chairman of Barclay's Bank in his 1935 annual speech to the shareholders mentioned that only 200,000 of the 1,500,000 customers of that bank were borrowers.

history, no great accuracy of measurement is essential. There is no difficulty in accounting for the great real rise in the amount of "money in the banks" which whatever machinery of measurement is applied will be admitted to have occurred in the last few centuries. The aggregate of this particular form of debt has increased not in consequence of any mysterious power of banks to "create something out of nothing" being exercised (though only with astonishing moderation), but owing to causes of the same character as those which are responsible for the growth of the aggregate of many other kinds of debt. If we had statistics of the aggregate amount owed to shopkeepers by their customers, we should not be surprised to hear that it had enormously increased since the beginning of the seventeenth century. "Who," we should ask, "would expect anything else, considering the increase of population and of shops to serve it?"

In the absence of knowledge of reasons for the contrary we should naturally expect the aggregate of this banking debt to rise at the same rate as population. In fact we know of several important reasons why it should have increased faster than population. One is that modern population, owing to the decline of natality, has come to contain a larger proportion of adults, and it is only adults who have considerable sums in their banks. Another is that the adult population has come to contain a larger proportion of persons who, owing to intelligence, wealth, and the nature of their commercial relations are capable of benefiting by keeping a part of their means in the form of "money in the bank." A third reason is the fact that modern practice makes banking accounts considerably more numerous than the persons who have them. The number of companies and associations for all kinds of purposes, commercial, social, and scientific, each with its own bank account, is continually growing, and solicitors and agents of all sorts are getting more and more into the habit of keeping separate bank accounts for separate funds instead of jumbling a number together. It is even becoming not very unusual for a person to have more than one bank account for his own purely private purposes—perhaps one in town and another in the country, or one on which his wife draws for household expenses and another from which he draws his pocket-money and accumulates his savings. It is only within a very small range that one of these accounts will, as the banks say "help" another, and even when that is the case and the bank sets the "goodness" of one account without any reservation against the "badness" of another, the

person who has the two accounts will have to be exceptionally strong-minded and careful in order to succeed in keeping as little money in the bank as he would if he had only one account. This is certainly suggested by the readiness of banks to open additional accounts for a customer.

Other good reasons for the increase of bankers' liabilities to their customers which we call in common speech " money in the banks," may be thought of without much difficulty, but it is scarcely worth while to linger over this part of our subject. The obvious reasons have not been disputed, and if they have been ignored, it has only been because discussion has raged over the very short period during which statistics of aggregate deposits have been available. For that discussion it has been tacitly assumed that what we may call the normal growth must be small enough to be safely ignored in dealing with the fluctuations from one year or small group of years to another. The assumption may perhaps be justified in regard to a period like the last twenty years, when fluctuations have been excessive, but even in that period normal growth should be allowed for in drawing inferences from the statistics.

Coming now to the more difficult and perhaps more interesting question of the causes of fluctuation in the aggregate of money in the banks, the causes that is to say, of the rises and falls which are not the result of slow and gradual changes like growth of population, we should begin by reminding ourselves that as banks offer to accept loans without limit, and to repay them when asked to do so, their part in the matter is a passive one. The active party is the lenders to the banks. These, as a body, make the aggregate loan to the banks rise when they offer more on loan than they reclaim and make it fall when they reclaim more than they offer. That any single person can make his own balance at the bank rise by paying in money (whether in cash or cheques) and make it fall by withdrawing cash or paying away cheques, everyone who has ever had a balance to his credit knows. No one denies this, but some theorists have denied that what is true of each lender taken separately is true of the whole body of lenders taken together. Every other kind of debt can be increased by the lenders lending more, and diminished by their being repaid, but it is denied that this is true of bankers' debts to their customers. This denial, however, is perfectly groundless. The banks are only intermediaries, and, like other intermediaries, can be used or not used at the discretion of the principals. Saving persons may accumulate savings in banks and enable the banks to

advance money to builders, or they may pass their savings direct to the builders. A mortgagor may get his money from a bank which has got it from a lender-customer, or he may get it direct from that person who will then take it out of the bank. Thousands of bank-customers may suddenly be induced to cut down their bank balances in order to take up National Savings Certificates, and the Government may use the money to redeem Treasury Bills held by the banks.[1]

Given that the lender-customers can and do alter the amount of their loans at their own free will, the next question is what makes them do it. In primitive conditions and in some countries like the United States where conditions are not primitive, but ill-conceived legislation has prevented the growth of a banking system inspiring complete confidence in its solvency, one obvious answer is " variation in the amount of confidence in the solvency of the banks felt by

[1]The idea that the lender-customers have no free-will in regard to the aggregate of their loans to the banks seems to be founded on three rather naive misapprehensions :

First, a quite unfounded belief that if one person's credit-balance at his bank is reduced by any given sum, that sum must be added to some other bank-customer's credit-balance unless it is taken out and retained in cash. The fact that it can be applied to repaying another person's debt to a bank or to purchasing a security from a bank is overlooked.

Second, an unconscious identification of the transactions between the banks and all the world outside with the transactions between the banks and the lender-customers only. Excluding the banks' profits (or losses as the case may be), the banks' payments to the rest of the world must be just equal to those which they receive from it, but this does not in the least require that the payments of the banks to their lender-customers alone must be equal to the payments which they receive from those customers alone. If the lender-customers pay more in than they take out, the banks preserve equality of receipts and payments from and to the whole world outside themselves, by paying more out in loans and in the purchase of investments than they receive in repayment of loans and from sales of investments.

Third, a very curious delusion that the cash holding of the banks is the amount of money for which they are really indebted to their customers ; all the rest of the money standing to the credit of customers in their books being supposed to have been " created by the banks themselves." Of course the cash holding of the banks is the cash which they have received from *all* sources less the amount which they have paid out to *all* quarters, and gives us no information whatever about either the gross or net amount which has been paid in (" deposited ") by the lender-customers. As for the " creation " of deposits by the banks, I believe that out of fifty-four years during which I have been a bank-customer, I have been a lender-customer for fifty-three, and in the whole of that time I have not paid in a total of £50 in cash, though I have drawn out in cash more thousands of pounds than I like to reckon up. But does that entitle anyone to allege that the whole of my present credit-balance or the amount by which it exceeds £50 (if it does exceed £50) is due to the bank's creative powers rather than to my action in having let the bank collect my earnings and dividends and not having at the present date reclaimed quite the whole of them ? Of course in one sense ordinary debtors may be said to have created their debts, as for example, the British government has created the national debt, but this is not the sense in which the banks are alleged to create deposits.

their customers." If a wave of want of confidence occurs, some customers with small credit-balances will withdraw cash to keep in their houses, while others with larger balances will draw them down by using them to purchase the securities which the banks are selling and to provide the loans which the banks are recalling. But in this article I am only concerned with countries like our own where confidence in the banks is so complete that variation in it, if any, is absolutely negligible. Where variation of confidence in the banks plays no part we shall do well to divide the aggregate of credit-balances into three portions ; first, working balances, second, sums arising from realisation of investments and at the moment awaiting re-investment by their owners, and thirdly, sums arising out of savings and being gradually accumulated for investment by the savers as soon as it appears desirable.

(i.) *Working Balances.* If a person's receipts and payments were so neatly arranged in time and amount that each payment had to be made just when an exactly equal receipt came in, he would have no need for any balance at his bank. But nobody's receipts and payments are as tidy as this ; most people's receipts arrive in one set of jerks, and their payments become due in another set of jerks, and the two sets altogether fail to agree. Consequently, it becomes desirable to hold over some of the receipts from the seasons when they exceed payments in order to meet the requirements of the seasons when payments exceed receipts. If this were all, working balances would be reduced to nil at certain periods ; for example, a person receiving a salary quarterly would have a balance amounting to a whole quarter's salary immediately after the time of payment, and it would fall to nil just before he received the next quarterly payment. But people do not like to " run things so fine " as that ; something is kept for contingencies in the shape of unlikely but possible expenses, if not also in the shape of failures to receive payments in full on their due dates. Something more is also often kept for fear that if the account looks very bad from the bank's point of view (that is, if the average balance is small and the work involved by the account is large) the bank will want to make a charge for keeping the account.

It seems clear from this that a depreciation of the unit of account, *alias* a general rise of prices, must tend to induce the keeping of larger working balances measured in units of account, since the discrepancies between receipts and payments must grow in magnitude when both receipts and payments are measured in the

depreciated unit ; and, of course, *vice versa*, appreciation of the unit of account will tend to diminish working balances. We may remark especially that companies which are making large profits in consequence of the rising prices are likely to have much money at the bank—often for a time on deposit—waiting to be distributed in dividends to the shareholders. But it would be rash to conclude that working balances as a whole must vary, not only in the same direction but also in the same proportion as prices. They depend very largely on estimates of what will be necessary made sometime before the event, and estimates, even of very most "absolutely necessary" things, are in practice very elastic. They can be both squeezed and allowed carelessly to expand. In a boom with rising prices, people are inclined to squeeze their working balances in order to spend as much as possible in the development of their own business or in securing a share in other businesses. The prospect of high and certain profit makes it seem well worth while to run the risk of exhausting the working balance and having to borrow from the bank ; especially as the cost of borrowing is likely to be under-estimated in a boom.

That this under-estimation of what is required for working balances occurs seems to be shown by the difficulties which are met towards the end of a boom. Credit balances are found insufficient, and after exhausting them, the customers ask for loans from the banks, and the banks, having too little coming in to satisfy their demands in full, are bitterly accused of "restricting credit," "deflating," and other high crimes and misdemeanours.[1]

(ii.) *Funds awaiting re-investment.* The magnitude of this portion of the aggregate money in the banks would be trifling if it came into being only because it is not always possible to "get straight out of one investment into another" without a moment's delay. But in addition to that irreducible minimum, there is often a large sum which is due not to the technical difficulty of getting into the new investment, but to hesitation and procrastination engendered by mistrust of available investments, combined with confidence in some banks and also in the unit of account which those banks promise

[1] I well remember that when the post-war boom was just bursting, a banking magnate gave me loudly and emphatically his answer to such reproaches, "We can't lend more ; we haven't got the money !" And he was not a member of the derided "old school," but a strong believer in banks creating deposits. Of course, if it were really true that, "every loan makes a deposit," the banking system as a whole would never find itself short of money and banking would be great fun. Unfortunately, in fact, bankers resemble other human beings in respect of inability to compel people to lend them indefinite amounts.

to pay. Mistrust in the security of property and the stability of currency in his own country sometimes leads a man to sell his property there and exchange the proceeds for the currency of a foreign country and then, as he knows little about the investments available in that country or mistrusts them, he lends what he has acquired in the currency of the foreign country to one of its banks and rests content with a low rate of deposit interest, comforting himself with the belief—often ill-founded in recent years—that he will be able to get his money out in time if he sees anything going wrong. Or it happens that there has been a sudden fall in the general rate of interest and a consequent rise in the price of gilt-edged fixed-interest securities. A number of holders of such securities cannot believe that the rise is more than temporary, and therefore sell, and keep the proceeds in their banks under the impression that they will be able to buy in again at a lower price before very long.

This portion of their liabilities is bound to be a source of peculiar anxiety to bankers. The foreign part of it is "bad money" to them because it may at any moment be all reclaimed in consequence of some event—a mutiny in the navy, for example—which no reasonable person could be expected to foresee. The foreign creditors cease to be content with claims to the currency of the country, and will not even be satisfied if they are given actual currency in exchange for their claims, and therefore ask for payment in gold if the country is on the gold standard. If the country is not on the gold standard, they will try to get either gold or currency of their own country by exchanging their claims to the currency of the bankers' country or gold or currency of their own country. This depreciates the currency of the bankers' country against gold and the foreign currency so much that it becomes more profitable for foreigners with claims to currency of the bankers' country to buy goods in that country and export them, so that they get paid in goods. There is really no harm in this if it is allowed to work itself out without interference but as it is misunderstood, and all sorts of means are adopted to hinder it, much alarm and inconvenience are likely to result

The domestic portion, arising from doubts of property-owners about the continuance of a low interest rate, would not much trouble the bankers if they were as sure that the low rate would continue as the property owners are that it will not, and if they had no particular principles or traditions to follow in making their own investments. They would then cheerfully invest the money of these doubting

owners in the securities and shares which these owners would want to buy when they were at length obliged to abandon their doubts. But this cannot be done, because in the first place the bankers are not very sure that the doubters are wrong, and in the second place principle and tradition prevent them going much outside the small range of investment in which the investor is sure of getting his capital back intact within a not remote future. Consequently, the banks make a very large demand for gilt-edged securities, preferring especially those which must be paid off within short periods. The annual yield from all gilt-edged investments therefore becomes extremely small, and from the short-dated portion no increment of capital-value can be obtained to offset the small annual yield. Thus though the risk of dealing with this portion of the aggregate is small, the profits are also small. If it is asked, " why not lend the money instead of investing it ? " the answer is that bank loans are only made to people who ask for them, and nothing in the situation described suggests any cause of increase in the demand for loans.

(iii.) *Accumulations awaiting initial investment.* In the simplest economy, such as that of an isolated individual or a collectivist society, the accumulation of desirable objects can be effected without the use of money simply by labour being so directed that a surplus of such things is produced over the quantity of them destroyed by time or use. Robinson Crusoe accumulated when he built himself a house without letting the rest of his equipment deteriorate while he was building. The small society consisting of Crusoe and Friday accumulated in just the same way. But after people fell into the habit of buying and selling goods and services for money, individuals whose income exceeded their expenditure began to accumulate money in the first place, and then, when the store of money had reached a convenient amount, they procured with the money houses and other things which they wanted to hold, and called this " investing "—giving a new form to—the money. Now that banks, including savings-banks, have been long established, savers have ceased, with negligible exceptions, to accumulate stores of money in their houses and back gardens, and instead, accumulate by lending money to their banks, each saver paying in more than he takes out until a suitable time for " investment " arrives, when he withdraws the accumulated amount and spends it in procuring the property which he wishes to retain. In modern western countries by far the greater part of the accumulation which takes place is effected in this manner, only a comparatively small portion being

effected in the old way, as for example when a government builds new roads with the proceeds of taxation, and when a landowner or a house-owner improves his own property either by the labour of his own hands, or by employing persons whom he pays with money which has not formed part of an accumulation at his bank. As the individual accumulations in the banks are numerous, and are continually being augmented and depleted, they form what we may call a pool of savings awaiting investment—awaiting investment, be it understood, by their owners, since it is not uninvested by the banks, which will be doing their best to utilise it profitably in loans and the purchase of securities.

As to the fluctuations of this portion of the aggregate, we are naturally at first inclined to say that when times are good and prices rising, people can and will accumulate more money in the banks, because their expenditure, though it will rise, will not rise as much as their income, so that their savings will be larger and the pool of savings will grow. But the magnitude of the pool depends on the outflow from it as well as the inflow into it.

We can imagine a change in the outflow following a change in the inflow so closely that no appreciable change in the pool would occur. A few savers invest their accumulation regularly at fixed dates, such as the first week in January and July, whatever may be the amount which they have available, whether it is large or small. Changes in the outflow for investment from these persons' balances will very soon counterbalance changes in the inflow from their savings. Another small body of savers invest as soon as they have accumulated some fixed amount such as £500. These will find their fixed amount ready sooner than before in good times and later than before in bad times, and therefore will invest sooner in good times and later in bad times. If all investors were like these unspeculative souls, rises and falls in the inflow from savings would be soon counterbalanced by similar changes in the outflow, and the magnitude of the pool would only be altered by the small amount for which the lag would be responsible.

But the great majority of savers, controlling by far the greater part of the investing, follow no such rigid rule. They ask themselves or their bankers or their stockbrokers whether the time is propitious for investing, and they hurry forward if the answer is that the time is good, and they hesitate and hold back if the time is said to be bad. As one of the most striking features of a boom is that it is believed at the moment to be a very good time for investing, it follows that

in a boom these savers are likely to reduce the magnitude of the pool by taking out for investment rather more than the amount which they are putting in by saving, although that amount has been increased by the boom. And of course, conversely, in a depression they are likely to increase the pool by taking out for investment less than they are putting in by saving, although that amount has been diminished by the depression. The effect of this will more than offset the small change in the opposite direction which the lag in the case of the rigid-rule savers tends to cause, so that though the total inflow into the pool may be smaller, the pool itself may easily be greater in a depression than in a boom.[1]

What has been said about the three sections of bankers' liabilities to their customers should as a whole be sufficient to dispel the plain man's astonishment at money in the banks being not much less in nominal quantity and apparently a good deal more " plentiful " in a period of deep depression when everyone feels short of money than in a boom when large numbers secretly feel like the draper who said to me rather plaintively in 1920, " Drapers can't help making money in these times." The natural tendency of the good time with its high production is to require bigger working balances and to augment the inflow into the pool of savings awaiting investment by their owners, and the high level of prices (*alias* depreciation of currency) accompanying the boom tends to raise the nominal working-balances and the nominal pool of savings still further. But an opposing force appears in the fact that the boom strengthens the desire of the banks' lender-customers to keep both their working balances and their uninvested savings as low as possible in order to take the

[1]There is little in common between the three-fold classification adopted above and the two-fold classification into current and deposit accounts, followed by the banks themselves. Some small customers of the ordinary banks and all the customers of the savings banks have deposit accounts only, and in their case these accounts include both working balances and savings awaiting investment by their owners, working balances being understood in the largest sense, so as to include even money retained for expenditure in old age or on the owner's funeral. The deposit accounts of other customers include almost the whole of funds awaiting re-investment, and a large portion of working balances, but almost nothing of savings awaiting initial investment. Large portions of working balances are put on deposit because the owners know that these portions will be required at a certain date and not before, like the money required by a company to pay interest and dividends. Very little of savings awaiting investment is ever on deposit, because the savings accrue on the saver's current account, and there is very seldom any object in transferring them to deposit account as a preliminary to investing. That deposit accounts in a depression become a larger proportion of the whole deposits in the ordinary banks may be due either to disproportionate growth of funds awaiting re-investment or to slackness of trade making it possible to transfer for the moment more of working balances to deposit account.

utmost advantage of the apparently favourable opportunities for using and investing money. The depression, on the other hand, distinguished as it is by low production and low prices, requires smaller working balances, and brings about a diminution of the inflow which feeds the pool of uninvested savings. But the loss of desire on the part of the lender-customers to reclaim their money from the banks and utilise it fights against this influence, and allows bankers' liabilities to their customers to keep up even in nominal amount to the magnitude which so surprises and puzzles the plain man.

I certainly hold no brief for the governments and central banks which between them have so atrociously mismanaged gold and paper currencies since 1914. I have said what I think of them in unvarnished terms in *Money* and in *Modern Currency*. But I hope that what I have said will help to relieve the " harmless, necessary " ordinary banks, which neither hoard gold nor issue paper currency, from some of the reproaches which have been most unjustly hurled against them. It explains the large amount of " money in the banks " in a depression not as the result of wicked machinations on their part nor of the glittering promises of high interest (10s. per £100 !) which they offer for sums placed on deposit, but as the natural consequences of their customers' reluctance to exchange their rights to money for rights to other forms of property. The evil effects of this reluctance in causing unemployment and low production are not aggravated but diminished by the fact that the banks are following their profession of accepting all money offered to them ; if they gave up, much currency would be hoarded, and what the *quondam* bank-customers were driven to invest they would invest in just the same way as the banks have invested it. A general swing of belief towards confidence in the desirability of holding money and claims to money rather than other property is no doubt the proximate cause of depression, just as a swing towards confidence in property other than money is the proximate cause of boom. But the ordinary banks are in no way responsible for the prevalence of this state of mind. It is elsewhere that we must look for the real " villains of the piece."

Besides exonerating the ordinary banks and solving the plain man's puzzle, what I have said should help us to reject the theory of some very unplain men to the effect that the trouble in a depression is that large savings are not being invested. In fact, of course, everyone knows that his own savings and those of most other people

are smaller, if not altogether wiped out, owing to the fact that incomes have fallen and expenses have not fallen so much. Intelligent persons are also aware that in a depression the "constructive industries" are particularly inactive, so that additions to property are small, and they know that these additions constitute society's surplus of production over consumption which is society's "savings." If ten or twenty per cent. of the working force of the community hitherto devoted to the production of the very things which form the surplus is thrown idle, their product will drop out and the surplus will be that much less.

The strange belief that savings are large during a depression was doubtless originally derived from a confusion of saving in the sense of spending less than income with saving in the sense of spending less than in a preceding period of time. Because people were spending less in a depression than they did in a boom, they were quite illogically supposed to be having a larger surplus of income over expenditure. But the belief has acquired some support from the magnitude of bank deposits in times of depression. This support is cut away when it is shown that the largeness of bank liabilities to customers affords no proof or presumption of large savings, and that such savings as have been lent to the banks are not uninvested except in the sense that they are not invested in the names of their owners.

We may add that the conception of saving followed by investment which is appropriate enough when we are dealing with individuals in a commercial society, is quite inapplicable to the community as a whole. The individual may accumulate money in the bank and then exchange his claim on that money for some income-yielding property which he desires to hold, and he may call the two operations saving and investment. But the community does not accumulate money and then exchange it for other property. It simply provides a distribution of labour and other requisities of production which results in consumption being provided for and a certain surplus added to equipment.

EDWIN CANNAN

BENTHAM ON GOVERNMENT[1]

Jeremy Bentham (1748—1832), is said to have expressed a wish that he might, once every hundred years, return to earth in order to see for himself how far the nations of the world had, in their political organisations and practice, followed that principle which had, " never yet been well developed nor well followed out by any legislator "—the greatest happiness of the greatest number.

Supposing that Bentham were here among us, drawing up his report on the first of these centennial visits what would his main conclusions be? He would have observed, one may be sure, in many communities and in many political quarters a bias against democratic institutions. In this bias he would have seen confirmatory evidence of the tendency of governments to pursue, as ends, objects which have no value save as means to public happiness." The example of a government which, " entirely occupied with wealth and commerce, looks upon society as a workshop, and regards men only as productive machines and cares little how much it torments them, provided it makes them rich " (*Principles of Legislation*, p. 14), would not have escaped his observation : and he would have noted other examples of governments which " esteem power and glory as the sole means of public good," and " full of disdain for those states which are able to be happy in a peaceful security . . . must have intrigues, wars, and conquests." As a result of his general survey he would have been forced to conclude that the principle of utility had made little, or no, headway against that arbitrary " principle of sympathy and antipathy " which in his own day was followed by the governments of most nations.

On the other hand, he might not have been disappointed with the progress made by his own countrymen along the utilitarian path. His pleasure at finding that much of the law relating to different topics had been (in his own phrase) codified, would have been somewhat

[1] The page references to Bentham's works in the text are either to Bowring's works of Jeremy Bentham in 11 volumes or to Ogden's English Edition of the *Traités de Législation* (comprising the Principles of Legislation, the Principles of the Civil Code, and the Principles of the Penal Code).

diminished by the discovery that the Statute Book was still cluttered up with many out-of-date Acts, among which he would have recognised one particular *bête noir* of his own—the Sunday Observance Act. The range and complexity of new legislation, and the extent to which that legislation depends upon administrative provisions for carrying it out, would have amazed him. By some of it—in particular, by the legislation of Tariffs, Quotas, and Subsidies, he would have been frankly perturbed, but in the law relating to Education, to Public Health, to Housing and Town Planning, he would have found much to approve. In the activities of the Ministry of Health, the Ministry of Transport, the Board of Education, and the Board of Trade, he would have recognised many of the positive functions which, in his Constitutional Code, he ascribed to the Health Minister, the Interior Communication Minister, the Education Minister, and the Trade Minister, respectively. It would have pleased him that these and other modern Departments of State follow the very same methods of administration which he recommended under the names of " the Inspective," the " Recordative," the " Statistic," the " Report Making," and the " Melioration-Suggestive " : and in their general objective, that of seeking, by way of stimulus and control, to improve the conditions under which John Citizen and his family live, he would have sensed a true utilitarian purpose.

Some interpreters of Bentham there have been who will think otherwise. During the past half-century attempts to fasten upon Bentham the labels of *laissez-faire* and *individualism* have been persistent. Bentham himself would probably have disowned both attributions on the score of ambiguity : he did not conceal his impatience with words which carry emotional over-tones of meaning. The excuse for these attributions, if it is an excuse, is that Bentham has, in the history of English thought, figured primarily as the founder of a *School* ; whereas this *rôle* was a subsidiary one. His true *métier* was that of a craftsman in the sphere of applied political science, an inventor of legal and political remedies, some of which (not necessarily those which influenced most the thought of his own generation and the next), were destined to find a secure place, either on the Statute Book, or in the modern practice of public administration.

Bentham's contribution to the science and technique of Government can neither be understood nor appreciated until certain stock views about him have been disposed of.

Here are a few samples in order of date :

" With Bentham the altruistic impulses are still scarcely admitted, as he contemplates society as a mere aggregate of jostling individuals." Leslie Stephen ; *English Thought in the Eighteenth Century*. Ch. IX., Sect. 139 (1876).

" Bentham can understand nothing in law but the character of a command." Bosanquet ; *Philosophical Theory of the State* (1902).

" His political reasoning rested on a faulty psychology, an erroneous conception of sociology, and a very inadequate system of ethics. Yet despite all these defects, progressive and practical reformers throughout the world owe almost more to him than any other man. . . . These . . . ideas (that the average man acts entirely from motives of self interest or selfish interest, and that the greatest happiness of the greatest number is the foundation of morals and legislation) comprise the whole Benthamite formula, except the assumption common to other thinkers of that age that individual selfishness produces collective happiness." Professor Temperley ; *Cambridge Modern History*, Vol. 10, Ch. 18 (1907).

" His conception of government relies upon the belief, that each individual and each class pursues their own interests to the exclusion of those of all others : that no class or individual ought to be allowed to do so unchecked so as to involve a tyranny of the interests of some over the interests of others, and that since interest alone can drive out interest, the free play of private selfishness on every hand will alone secure the freedom of everyone ; at least so far as it is not incompatible with the interest and freedom of the rest of the population. To these propositions may be added the not very consistent belief that the interest of each is necessarily identical with the interest of all." Professor A. R. Lord ; *The Principles of Politics* (1921).

" When Bentham and his disciples set an individualistic perspective to the theory of the state what in reality they did was simply to put that state at the disposal of the owners of political and economic power." H. J. Laski ; *The State in the New Social Order* (see *Studies in Law and Politics*, 1932).

" Bentham regarded the state as chiefly a coercive and law making and police organisation . . . . this coercive view of the State's power lies at the root of Bentham's *laissez-faire* attitude

as it does of Adam Smith's in its specific application to economic activities. . . . His doctrine was directed far more to the removal of established abuses than to the replacement of old institutions by new." G. D. H. Cole ; *Some Relations between Political and Economic Theory* (1934).

The germ of some of these interpretations is traceable to Dicey's lectures on Law and Public Opinion in England during the nineteenth century, wherein he states that " the dogma of *laissez-faire* was practically the most vital part of Bentham's legislative doctrine," and refers to a " revolution of social or political belief (commencing round about 1870), and to conditions or causes which have favoured the growth of collectivism or . . . have undermined the authority of Benthamite liberalism."

Whether Dicey's general thesis is sound—that law-making public opinion took, after 1865, a new direction and came to favour a legislative programme fundamentally different from that which found favour during the preceding period, 1825—1865, is a question on which only a close examination of the Statute Book in the two periods can throw light. Our concern here is rather with the question whether Bentham himself would have been well-disposed towards the legislation typical of Dicey's period of collectivism, 1865 to 1900. Dicey, it will be remembered, defined collectivism as, " the school of opinion . . . often termed socialism, which favours the intervention of the State, even at some sacrifice of individual freedom, for the purpose of conferring benefit upon the mass of the people."

Each of the views quoted above contributes something to building up a consistent pattern of a social and political theory. But was that theory Bentham's?

The views may be generalised in two propositions :

(1) That Bentham makes no allowance for any impulse in human nature except the self-regarding ; (2), that since individuals are actuated by egoistic impulses, the sole function of government is to maintain by force such conditions as will prevent them from destroying or harming one another in their persons and property.

It is difficult to reconcile the first of these propositions with Bentham's four-fold classification of motives into, *the purely social* (*e.g.*, " benevolence ") ; *the semi-social* (*e.g.*, " love of reputation, the desire of friendship ") ; *the anti-social* ("antipathy in all its branches," and *the personal* (*e.g.*, " the pleasures of sense, love of power, pecuniary interests, the desire of self-preservation "). While " the personal

motives are the most eminently useful," since " nature has entrusted to them the preservation of individuals," " their movements must be regulated, moderated, and maintained in a right direction, by motives drawn from the two first classes." (*Vide Principles of the Penal Code*, p. 254). Our " inclinations," Bentham would have us understand, " are governed by motives " ; and every motive is " a pain to be avoided or a pleasure to be pursued " (*ibid.*, p. 374).

Bertrand Russell, in his *Freedom and Organisation*, 1814—1914, says that " Bentham did not distinguish between pleasure and happiness, and resolutely refused to assign a qualitative superiority to what are called ' higher ' pleasures." The second part only of this statement can be accepted. To admit a qualitative difference between pleasures involves reference to some test or standard distinct from pleasure. Bentham was careful (as J. S. Mill was *not*) to avoid this logical pitfall. On the other hand he did distinguish between pleasure and happiness. " The distinction," he wrote, " is that happiness is not susceptible of division, but pleasure is. A pleasure is single—happiness is a blended result like wealth. Now nobody would call a rag wealth, and yet it is part of the matter of wealth." (Bowring, Vol. 10, p. 585.) One of Oscar Wilde's characters described life as a " *mauvais quart d'heure* made up of exquisite moments." Some such thought was in Bentham's mind, when (*Principles of Legislation*, p. 31), he pointed out that pleasures and pains vary in value or harmfulness according to " intensity," " duration," " productiveness " (that is, tendency to produce pleasures or pains of the same kind), and " extent " (that is, the number of persons likely to be pleasurably or painfully affected).

Since motives (*Principles of the Penal Code*, p. 374), " may produce all sorts of effects from the best to the worst," the task of government is not (as the second of the above propositions implies) merely, or even mainly, one of coercion and restraint. The legislators, having at heart the best interests of all members of the community, are bound to take not merely a long-term view of what (measured in terms of happiness) will be best for this or that individual, but will have to consider the ultimate social effects of their policy.

From the legislator's standpoint some desires (*e.g.*, the " malevolent passions," or " the appetite for strong drinks," or " idleness ") are seen to be pernicious in the sense that the unrestricted pursuit of such desires would result in a balance of unhappiness for the community (regarded as a totality of individuals) in the long run. Yet

the problem of government is not the apparently simple one of sorting out—as it were—the goats from the sheep among desires, and attempting to destroy the former by the frontal attack of direct and penal legislation. " We ought not," says Bentham, " to attempt rooting out any affections of the human heart, since there is none which does not play its part in the system of utility " (*ibid*, p. 374). Hence he favours the method of what he calls " indirect " legislation, operating by means which " without having the character of punishments, act upon a man physically or morally, to dispose him to obey the laws, to shield him from temptations, to govern him by his inclinations and his knowledge." For, " when a Government orders it but gives its subjects an artificial interest to obey ; when it enlightens it gives them an interior motive the influence of which they cannot evade." John Stuart Mill in his *Principles of Political Economy* (Bk. V., Ch.XI., Sect. 1), draws a similar distinction between " two kinds of intervention by Government," the one authoritative, the other not ; but Bentham goes a good deal further than Mill in postulating a sphere of legislative and administrative activity which comprehends almost everything which is now commonly understood by social legislation.

Nor can it be conceded that Bentham, in his zeal to uphold the individual as the touch-stone of satisfactory government, ever deviates into accepting the view that it is best to leave individuals alone to pursue their interests in their own way. On the contrary he does not take, as some disciples of Adam Smith were inclined to take, the view that there subsists a natural identification between what is to the interest of the individual, and what is to the interest of society. Almost alone among interpreters of Bentham, Monsieur Halévy in his *Growth of Philosophical Radicalism*, has stressed the difference between such a view—one may call it for convenience " the doctrine of the invisible hand "—and Bentham's own view that Government is an art, the art of enlightening and guiding men to follow, in their own interest, social rather than anti-social desires. What Bentham called the *artificial* identification of interests furnishes almost the whole clue to his belief in the value of legislation and government. " The way to be comfortable," he wrote, " is to make others comfortable. The way to make others comfortable is to appear to love them. The way to appear to love them—is to love them in reality." (Bowring, Vol. 11, p. 71.) Whatever brand of philosophy this may be, it is certainly not the philosophy of the invisible hand !

If the main task of government is to get the individual to realise the utility of social motives in comparison with that of other motives, both personal and anti-social, the task of the Constitution Maker is to ensure that the individuals who participate in the work of government will have an inducement, in their own interest, to promote the interest of those they govern. Bentham called this the principle of "duty-*cum*-interest," and in his proposals for better government he never neglected it. It enters—twice over—so to speak—into his theory of the State; first, as a guide to the sanctions and scales of remuneration, designed to keep public administrators efficient; and, secondly, as a guide to policy in the drafting and application of ordinary laws.

Bentham, from the days of the Constituent Assembly, favoured democratic institutions, because, only in a democracy, can the judgment of public opinion on the utility of the laws and the other machinery of government be made effective. He saw clearly that, however enlightened the irresponsible despot or the irresponsible Board of Management may be, the lack of any sanctions to ensure responsibility is a fatal defect of such modes of government. He could appreciate the value of a despot like Catherine II. of Russia, as a Constitution-maker: he could find little or no value in a despot as a constituent power in the State.

On the other hand, Bentham was inclined to favour the type of democratic constitution which delegates powers to the single functionary rather than to a committee. This preference comes out strongly in his Constitutional Code, features in which bear a close resemblance to features in the United States Constitution. He was not, that is to say, partial to the committee form of administration unless the chairman is in the position of a chief executive—a "strong" president in fact—and the rest of the committee in the position of advisers. In his view a consultative committee might be valuable, not merely because several heads are better than one, but because the president's "associates" will be "witnesses against him in case he abuses his trust." Bentham, who had long since condemned the British jury system, in so far as the jury are in the position of judges in matters of fact, praises the system in his Constitutional Code as a device to ensure the responsibility of a Court of Law to public opinion. One of the many legal reforms he recommended was the substitution of the "quasi-jury," as judicial assistants and assessors, for the jury of trial.

But if the delegation of administrative powers to one man is to be preferred to the distribution of that power among several men, care must be taken not to retain any governor in office for a long time in the same district. This arrangement, which Bentham says must be " uniform," has been adhered to in the British system of Colonial government. Another device, of which again many examples are to be found in British practice, is the " renewal of governing bodies by rotation," " for " says Bentham, " a part should always be left so that the course of affairs may go on without interruption." He notes that one object of this device in practice has been, " to secure disinterestedness and purity of administration," but he doubts " whether publicity in proceedings and accounts is not a better means." Another object of the same device is to produce " a more equal distribution of the privileges which appertain to office."

Not only in the Constitutional Code (1822—1830), but in writings, begun thirty years earlier, out of which the *Traités de Legislation* was eventually put together and published by Dumont in 1802, Bentham devotes much attention to the discussion of " sanctions." Starting from the premise that " every system of management which has disinterestedness, pretended or real, for its foundation is rotten at the root " (see *Pauper Management Improved*, 1797, Bowring, Vol. 8, p. 381), he attaches the greatest importance to the influence of public opinion. " It is true," he says, " that upon most occasions the public judgment is heard, not before the measure is determined upon, but only after it is executed." Nevertheless, the freedom of the Press, which is no more than "to admit the advice of everybody," ought to be established as one " precaution against the abuse of authority."

Another precaution is " publication of the Reasons and Facts on which the Laws and Administrative Acts are founded." For " the freedom of the Press is a debt which rulers owe to their people ; to publish the reasons of their Laws and Acts is a debt which they owe to themselves " (*Principles of the Penal Code*, p. 460). A modern example may be found in the device of the " explanatory memorandum," sometimes (but not unfortunately always) issued when a new bill gets on to the Statute Book. The more ancient device of the " preamble " to an Act of Parliament is another instance.

In recommending (*ibid*, p. 463) that " the first law at the begining of a code should be a general law, limiting the exercise of delegated powers, " to such and such particular occasions, for such or such specific courses," Bentham strikes a very modern note. The detailed

recommendations in the Report of the Committee on Ministers' Powers in 1932 suggest that his precautionary advice is still much to the point, even in those states where (as in Great Britain) the Executive has no inherent power to issue decrees, putting into effect a policy expressed in general terms by the Legislature.

Bentham's final precaution—" the establishment of the right of association, that is, of Assemblies of the Citizens to express their sentiments and their wishes upon public measures," is again a remarkable forecast of future development. Such associations if permitted " might," he thinks " become one of the principal means of government in the most absolute monarchies." It is clear that he favours them, not merely as a harmless outlet for feelings that might take a revolutionary turn, but because he sees in them a means of making public opinion vocal and powerful. On Bentham's view, freedom of speech, the freedom of the Press, the right of assembly, and the right to form and join in political societies, are all essential elements to making the " Tribunal of Public Opinion " effective. Another element, perhaps the most important of all, is the establishment of a State system of education, designed to supplement rather than to supersede the efforts of parents who cannot afford to educate their children at their own expense.

The Tribunal of Public Opinion is not a standing body ; nor is it even, like the Privy Council, one which meets as a whole only on very rare occasions. Indeed it might be described as continuously in session. It meets whenever and wherever two or three are gathered together to discuss politics, to listen to a debate in the legislature, to attend a political meeting, to assist as jurors in the hearing of a case, to vote at an election, or to have an interview with a public functionary. Its place of assembly is uncertain, but ubiquitous ; its membership is not confined merely to those who have the right to vote but comprises also those who, according to Bentham's code, would not be enfranchised—women, the non-adult population, the illiterate, and the non-resident. The value of this Tribunal is not in any sanction which it can apply directly, but in the indirect influence which it exerts over the minds of those who occupy responsible positions in the Government. Only in a country, where conditions, approximating to universal suffrage, obtain for the election of legislators, will the Tribunal of Public Opinion have an effective place, and wield an influence commensurate with its large membership :

> " What is not proposed is, that the votes of any of them, shall on any particular question, be collected : on no other

occasion than that of an election of deputies will that be done in regular course. It is from the opinion expected, to be on each occasion inwardly entertained by them, that the good is looked for. It is not from anything expected to be said, only from what it is expected to be thought, that the benefit is expected." (Bowring, Vol. 9, p. 42.)

In this passage (from Book 1 of the Constitutional Code) Bentham seems to get nearer to the essence of representative democracy than most of its modern would-be champions. From the point of view of the "public functionary" the Tribunal of Public Opinion is somewhat awe-inspiring.—"Make public functionaries uneasy.—High pressure engine, nothing can be done without it. Nothing to be done by the people for their own security but by applying to their rulers, the force of the engine." (Bowring, Vol. 11, p. 74.) The duty of unfailing "urbanity" and of "abstinence from the insolence of office" is laid upon them. "The institution of his office has not among its objects the affording gratification to the vanity, much less to the pride of the functionary, at the expense of the feelings of those who have business to do at his office . . . in his quality of public functionary, his situation, with reference to every such person, is rather that of a servant than a master."

If Bentham's attitude to officialdom strikes one as rather less sympathetic than one might expect from him, one must bear in mind the method of recruitment for the public services in his own day—the extent to which patronage and nepotism prevailed, the number of sinecure posts, and the fact that salaries and fees seldom bore any relationship to the value or responsibility of the work performed. It is little wonder that his Constitutional Code provides for elaborate examination tests prior to appointment not only for the ministerial heads of departments, but for all subordinate public officials. Less easy to understand is the fact that success in a qualifying examination is to be only the first stage to an appointment: the second stage is the auctioning of vacancies among successful candidates. At first sight such an arrangement would seem designed to ensure that only the wealthiest candidates would obtain posts. One must, however, remember that the public service in Bentham's Code has no soft jobs or opportunities in the way of graft to offer. Promotion after entry will be strictly according to merit, and every post will command a salary not more than sufficient to induce the holder to work as well as he can.

Gladstone's views on retrenchment and the need for the utmost economy in public administration were not more austere than Bentham's. In a series of papers entitled, *Official Aptitude Maximised, Expense Minimised*, Bentham developed several ideas designed to secure for the taxpayer the benefits of cheap government. Some of these ideas savour more of parsimony than economical expenditure; one doubts, for example, whether the voluntary worker in the public service is really so cheap a proposition as Bentham would have us believe. One must remember, however, that he was fully alive to the advantage of offering exceptional rewards for exceptional services. In fact his whole scheme of efficient government would break down if those who ran it were not given a personal interest to remain in the public service.

To examine, in detail, Bentham's general plan for the organisation of the democratic State is impossible in a brief article, but those features, which like the Tribunal of Public Opinion, have a direct bearing on modern political problems, are well worth attention. Take, for example, the relations between the three powers, the legislative, administrative, and judicial—what principle governs their inter-relationship? One knows what to expect from a pregnant observation of Bentham in his *Principles of the Penal Code* (Part IV., Ch. XXI.), "the division ought not to result in separate and independent powers; for that would bring in a state of anarchy. Some supreme authority, superior to all, must be acknowledged which does not receive law but which gives it, and which has power over the very rules which regulate its own mode of action." This observation, critical of Montesquieu's famous separation of power, is a curious fore-shadowing of Dicey.

In Bentham's Code, a legislature, annually elected by the adult male literates, occupies this position of supremacy. Its function is not only to make laws, but also to appoint a Prime Minister as chief executive, every fourth year. It retains also the power of dismissing the Prime Minister, the Minister of Justice, and any of the thirteen Departmental Ministers, appointed by the Prime Minister. Among precautions against the abuse of authority, of which several have already been mentioned, Bentham suggests "putting the power of removal into different hands from the power of appointment."

Save for the fact that he is indirectly, not directly elected, Bentham's Prime Minister bears a strong resemblance to the American President. Like the latter he retains the power, not only of appointing and dismissing any of the Departmental Ministers, but

also of dismissing their subordinates of every grade. The Code provides three sanctions for enforcing the Prime Minister's responsibility : he may be dismissed not only by the legislature, but also by the electors, and thirdly, by a process of trial which resembles impeachment, he may be tried before the legislature for criminal delinquency, and, if found guilty, will lose his office.

By procedure, known in America as the " Recall," any legislator may be forced to resign if one quarter of the electors in his constituency demand it, and a majority confirm the requisition. The Departmental Ministers are appointed for life, but may be dismissed not only by the Prime Minister, but by the legislature. Their responsibility, both to the Prime Minister and to the legislature is thus assured. Out of the thirteen Departmental Ministries, six, the Ministries for Preventive Service, Interior Communication, Indigence Relief, Education, Domains and Health, are all concerned with domestic and social affairs. For most of the work they do it is much easier to find an analogue in the organisation of Government at the present day than in Bentham's time.

In his allocation of Departmental functions, Bentham follows that " principle of distribution, according to services performed," which the Committee on the Machinery of Government in their Report of 1918, preferred to " the principle of distribution, according to the persons or classes to be dealt with." Bentham is fully alive to the danger of overlap between the work of one department and another ; and is as careful as was the Committee to avoid demarcation difficulties, by providing for co-operation in any case where two or more departments are concerned in the administration of the same institutional service. Co-ordination between all administrative departments centres in the Prime Minister. The Ministers' offices are grouped in semi-circular fashion round the Prime Minister's own office, and each Minister can communicate with the Prime Minister by speaking-tube !

The departmental organisation of the Code, unlike that of the Machinery of Government Committee, does not provide for a Ministry of Justice, but this is only because Bentham—with an ingenuity anticipatory of possible criticism—provides for a Minister of Justice (like the Prime Minister, elected and dismissable by the legislature) who shall be independent of the administration. This Minister, however, maintains close and constant relations with one Departmental Minister, the novelty of whose office is apparent—the Legislation Minister.

The main function of the Legislation Minister is to report to the legislature, on any proposed amendment of the law, whether or not its form harmonises with that of the Code of which it is to be a part. If in the negative "his report," Bentham adds, "will be accompanied by a draft, making the amendment symmetrical."

Besides having the legislation-amendment-inspective-function, the same Minister receives all judicial amendments direct from the judicial authority, and reports upon them to the legislature in the same way.

Ever since the Report of the Committee on Ministers' Powers, the need for enlarging and strengthening the office of Parliamentary Counsel to the Treasury (where Government bills are drafted in consultation with the department or departments concerned), has been under discussion. It is typical of Bentham's intuitive genius that he realised the enormous importance of good drafting, and was prepared to delegate that work to a special Department which would form a necessary link, via the Ministry of Justice, with the Judiciary. His plan is one which ingeniously secures for the legislature the benefit of judicial experience and advice in the framing of new laws, without involving the judiciary in responsibility for the work of the administration. Neither Sir Edward Coke nor Lord Hewart could raise that particular objection to his proposals.

Bentham was also alive to the fact that drafting is highly skilled work which cannot be learnt in a day. "The office of the Legislation Minister," he says, "by the very nature of the case will thus become, though without the name and show of a School—a School of Legislation. Into this School, young men, destined for public employment, might be admitted at about the same age as in England, France, and other countries they are admitted into the office of an attorney-at-law." This suggestion is interesting in view of the fact that in America the technique of drafting has become a subject of intensive study in certain Universities.

Bentham's Code is worked out with great elaboration in all its details, and possibly many of the arrangements are impracticable. His desire to devolve upon subordinate local authorities all functions, legislative and administrative, which are purely local concerns, would doubtless meet with approval; but his idea that these local bodies should in their constitutions be mere replicas, on a smaller scale, of the National organisation, strikes one as too facile a device to overcome the *vis inertiae* of local customs and habits.

Another curious blind spot in Bentham's vision is his apparent neglect of the powerful forces that make for the organisation of political parties. A reader of the Constitutional Code would never guess that political parties were a universal characteristic of State democracy in the working.

The real strength of the Code lies on the administrative side. In respect of their general physiology and manner of functioning Bentham's Departments have a close resemblance to their modern counterparts. The enormous growth in recent years of institutional services, in connection with the work of public administration both local and national, was anticipated by Bentham.

No one who studies the Code could come away with the idea that Bentham seriously regards Government as an evil. It is for him, an evil only in the sense that doctoring is an evil, since if there were no diseases or disablements there would be no need for doctors. He admits (in *Principles of Legislation*, p. 48), " a striking analogy between the art of the legislator and that of the physician " : for both have to make allowance for different degrees and different kinds of sensibility. Government, he would have said, is necessary, not merely to protect the ordinary citizen in his person and property ; it is necessary also in order to raise the standard of health, of education, and of economic well-being, among those sections of the community which stand in special need of the services of Public Asylums, Public Hospitals, Public Schools, State-run Houses of Industry, and Employment Exchanges. The first necessity is admitted by the most rigid apostle of *laissez-faire* ; the second necessity is acclaimed by the adherents of the Positive State. Among the latter Bentham must certainly be reckoned. If it be true, as Sir Josiah Stamp says, that, " In a century the State has developed from the State as policemen to the State as nurse, doctor, chemist, and benefactor, guide, philosopher, and friend, from cradle to grave," Bentham would not have been perturbed by the event. He would have recognised himself and his ideals as much in Dicey's *Period of Collectivism* as in the same author's *Period of Benthamism or Individualism*.

A. L. Dakyns

SURPLUS CAPACITY IN THE LANCASHIRE COTTON INDUSTRY

Redundancy in the Lancashire cotton trade has existed for years and it is now accepted by everybody that we shall never again secure the volume of trade that we possessed before the war.

The war accelerated industrial development in other countries, and in some degree altered its form, but the forces which have caused Lancashire's difficulties were by 1914 already beginning to operate, and the last two decades would have been in any case a testing time for the industry. Great Britain's position in the nineteenth century was a transient phase which is never likely to recur. During the five years ending in 1913, she produced 60 per cent. of the cotton cloth which entered into international trade. But the war cut Lancashire off from her chief markets in the Far East and stimulated the growth of the industries which were already established there. Even in 1913, India had 6 million spindles and Japan over 2 million. These and other countries which were formerly markets for Lancashire's yarn and cloth learned to supply the bulk of their needs themselves and later to compete with Lancashire in neutral markets. In spite of the growing competition in neutral markets, however, about two-thirds of Lancashire's total loss of overseas trade since 1913 is due to the growth of local industries in her former markets. These industries are in all cases protected by tariffs and are likely to remain so. There is, therefore, little hope of a return to world prosperity solving Lancashire's difficulties.

Fresh problems have been created by the development of the rayon industry and of the use of knitted fabrics though their effects have not been wholly harmful to Lancashire. Rayon cloth is woven mainly in Lancashire and during recent years the hosiery industry has provided an increasing market for cotton yarns. With the development of staple fibre, rayon now promises to become a raw material for cotton spinners as well as cotton weavers.

Even in present circumstances, there are limits to the extent to which the output of the cotton trade is likely to contract. The demand of the home market is now larger than it has been for many years. Lancashire has a protected market in many of the Colonies, preferences in India and the Dominions, and favourable treatment in a

number of foreign markets, as a result of trade agreements. When all foreseeable factors have been taken into account, it is not unreasonable to estimate that the demand for Lancashire cotton goods during the next few years will not fall below a level which would give full time employment to 30 million spindles and 390,000 looms.

The present capacity of the industry is, however, much above this. At the end of 1934 there were 44 million spindles and 540,000 looms. Even allowing a margin for possible expansion, therefore, it is clear that the industry has a substantial surplus of productive capacity. It is suggested by some critics that the situation would be ameliorated by a change in our monetary policy, and by others that the whole structure of the industry requires reconstruction.

The first suggestion does not seem to me to merit serious discussion, but the second is of more importance and I will refer to it later. At the moment I will confine myself to the spinning section. 40 per cent. of its pre-war trade has disappeared, but only 15 per cent. of its spindles have gone out of commission. It is obvious that such a situation implies gross over-productive capacity and intense competition for such trade as is available. If natural economic forces had been allowed to operate a very large number of these spindles would automatically have stopped as their owners' resources became exhausted, but this has not happened and the process of elimination has been much too slow. In 1920 Lancashire had 58·7 million spindles. By 1926 the number had fallen to 57·3 million, by 1929 to 56 million and by 1932 to 52 million. Unhappily, however, throughout this period the production of the industry was falling faster than its productive capacity. The result has been that in the acute competition that has taken place the capital of all has been in varying degree destroyed and the industry as a whole enfeebled. Quite apart from the atmosphere of discouragement and hopelessness that are thereby generated there is insufficient capital available for the replacement of obsolete plant and the installation of new machinery of improved types. The cumulative effect of this condition operating over a long period is very disintegrating to the morale of an industry.

Since 1932 the number of spindles has continued to fall, but at a rather more rapid pace. The gap between capacity and production has thus been narrowed to some extent, but the margin is still far too large for any relief in the conditions of acute internal competition. The question, therefore, arises whether if a large percentage of the spindles is redundant, it would not be better to endeavour to

accelerate the process of elimination. It seems to me purely an arithmetical problem. Can the industry by levying a charge upon itself buy up and control the redundant spindles? If the charge is too heavy the cure is as bad as the disease. But I cannot believe that such an accusation can be brought against the basis proposed by the Federation scheme. By the creation of a Board controlled by responsible persons, capital can be obtained for this purpose. It cannot be obtained otherwise. And the only alternative is gradual decay, in which the physical assets of the industry progressively decline in value until they become completely worthless. It is said that the scheme will operate with great severity upon the operatives who will lose their jobs. It is no good pretending that the condition of the Lancashire cotton industry is not a major tragedy from any point of view. But if it has to contract its volume does this not involve suffering for innumerable individuals in any case? And I would suggest that if a portion of it can be run under efficient conditions the result in the long run is more satisfactory for everybody connected with it, operatives and others alike, to say nothing of the country as a whole.

It has also been suggested that the scheme is a policy of despair, that wealth cannot be increased by destroying wealth and that the scrapping of spindles in Lancashire will only lead to the erection of further spindles abroad, and to more intense competition in our overseas markets. These criticisms arise from misconceptions. Spindles are not wealth if there is no demand for their products. On the contrary, their excessive number detracts from the value of all of them. Moreover, spinners in other countries do not erect spindles because of anything we may do. They erect them to meet a demand for yarn which, they believe, can be sold at a profit. At the same time if, as I hope, the operation of the scheme will help to make Lancashire more efficient, so that we can obtain a larger share of the world's trade, there would be less incentive than there is now for the erection of new spindles abroad.

It is contended by some critics that the scheme is purely negative in its action, and makes no positive contribution. So far from the scheme meriting condemnation on such grounds the very reverse seems to me to be the case. The first desideratum is to restore some order in the industry, and some balance between the forces of production and consumption and, having regard to the historical background of the industry, to interfere as little as possible with individual management.

The traditional basis of demarcation in the Lancashire cotton industry is horizontal. Spinning, weaving, bleaching, dyeing, and merchanting have, broadly speaking, been carried on as separate functions. It is most inexpedient to ignore this, and re-adjustment is just as necessary in the other sections as in spinning. But each section must deal with its own problems separately, and a solution imposed upon them from without will fail. When this process is completed it will be possible much more effectively to approach the task of welding together the interests of the different sections and creating a new organism which will be more successful in securing trade. At the present time and while every section is in a condition of acute disorder no such concerted action is possible.

I have no illusions as to the limitations of what is now being attempted. But there is no tradition of co-operative action in the industry, and if too much be attempted at once the result will not be effective.

If on no other grounds, I welcome the present attempt as showing the industry that a changed world involves changed conditions and that if we desire to survive we must achieve a new outlook and a greater desire for mutual forbearance and co-operation.

T. D. Barlow

NOTE ON SIR THOMAS BARLOW'S ARTICLE

It may be of interest to readers of Sir Thomas Barlow's article—especially to those perhaps not familiar with the cotton industry—to know the main details of the scheme now being considered for dealing with surplus capacity in the spinning industry.

In the last three months of 1934, the spinning industry had 13½ million spindles (ring spindles counted as 1½ mule spindles) more than was necessary for full time running. Four million of these surplus spindles were in the fine spinning (Egyptian) section, and 9½ million in the coarse and medium spinning (American) section. Thus, if there had been 13½ million spindles less in the last quarter of 1934 and output had been distributed over the remaining spindles, the spinning section would then have been working to 100 per cent. capacity.

It is proposed to remove 10 million spindles out of possible production. A " Surplus Spindleage Board " would be formed to buy the necessary number of spindles or to arrange with individual

firms not to work a specified number of spindles for at least an initial period of five years. The Board would require capital estimated at not more than £2 million for this work, and levies payable on all running machinery would provide the interest and sinking fund allowances on this amount.

The amount of initial capital needed is estimated on the basis of a purchase price of five shillings per spindle, less one shilling per spindle to be realised on scrap value. No machinery will be allowed to be exported for erection abroad. It may not be found necessary to buy up 10 million spindles. Some spinners may be willing to keep their plant idle for a number of years if some contribution is made towards the cost of maintaining the plant in condition. The Board would be prepared to make such contributions subject to the provision that no such payments shall exceed £500 a year for 100,000 spindles and owners of not more than one million spindles shall be receiving such payments at any time.

The sum required for interest and sinking fund allowances would be about £180,000 a year for fifteen years. Levies to raise this amount would be payable on all active spindles and it is proposed that the levies payable per spindle in the American section should be higher than in the Egyptian section in the ratio of 9 to 7. The annual levy would be not more than £657 per 100,000 spindles in the American section and £511 per 100,000 spindles in the Egyptian section. The incidence of these levies would vary from one-fiftieth of a penny per lb. on 16's counts to one-tenth of a penny per lb. on 80's counts. Suitable arrangements would be made for firms wishing to close or restart mills but no firm would be allowed to erect additional spinning spindles (mule and ring spindles), while the scheme is in force, without the consent of the Board.

The final details of the scheme have not yet been settled. A sufficient majority of the firms in the spinning industry have agreed to its general principles and a request has been made to the Government for an Enabling Bill to be drafted which would make the scheme legally binding on all firms in the spinning industry.

H.C.

THE TERMS OF TRADE

THE purpose of this article is to discuss, and if possible, to elucidate more fully than has been done hitherto, certain aspects of a topic the importance of which in a country's economic relations is becoming steadily more apparent, namely, the terms of trade between its imports and exports. It is divided into two sections. The first deals with certain theoretical distinctions, understanding of which is necessary to appreciate the significance of movements in a country's terms of trade; the second describes briefly the course of Great Britain's terms of trade since the war, and points out certain conclusions which appear to follow from their trend.

I

We may commence by enquiring what is the precise meaning to be attached to the phrase " the terms of trade." There have been two writers principally responsible for discussion of the theoretical aspects of the subject; Marshall and Taussig. Their concepts differ, and the difference corresponds to an important real distinction.

Marshall defines the terms of trade as the " rate of interchange " between " representative units " of a country's imports and exports.[1] *Prima facie*, this implies that the terms of trade are a ratio between physical quantities of goods, so that a change in them represents a change in the relationship existing between these quantities. At an earlier stage, however, Marshall has described these " representative units " as " bales, each of which represents uniform aggregate investments of her (*i.e.*, the country responsible for the production of the goods in question) labour (of various qualities) and capital."[2] With this additional qualification, the terms of trade in Marshall's usage become not merely a relationship between physical quantities of goods, but between the products of a given amount of resources; so that a change in the relation between the volume of a country's imports and exports carries with it the implication that the real

[1] *Money Credit and Commerce*, p. 161.

[2] *Ibid*, p. 157.

cost of her imports, that is, the cost in terms of the resources used to produce the exports sent in exchange for them, has altered ; either because the comparative efficiency of her resources, or of the resources of foreign countries, has changed, or because there has been an alteration in the strength of demand in either country for the products of the other, with the result that a changed quantity of her resources is necessarily devoted to obtaining a given amount of the products of the other country.

Taussig defines the terms of trade in the following words : " The quantitative relation between these physical amounts—between pounds of copper and yards of linen—we designate as the ' barter terms of trade '."[1] These " pounds of copper " and " yards of linen " are taken as representative units of imports and exports in various examples given in the course of his discussion of the subject, and he makes it clear that he wishes this definition to be understood as similar to Marshall's. But it is of fundamental importance to note that Taussig does not postulate that a representative unit of goods is the product of a given quantity of resources, as does Marshall ; consequently a change in the terms of trade as understood by him does not carry with it any underlying implication regarding the relation between the amounts of resources which have gone to the production of a country's imports and exports, but is concerned solely with the quantities of goods which are exchanged.

The difference between these two concepts can, as will appear, be a highly significant one. For the remainder of this article, the phrase Terms of Trade will be used in speaking of Taussig's concept, the relationship between the physical amounts of imports and exports ; and the phrase Real Ratio of Interchange when reference is made to the underlying relationship between the amounts of resources used to produce the goods in question, which is designated by Marshall's concept.

In practice it is not possible to compute what either relationship actually is at any given time, for the reason that this obviously would involve making a complete inventory in one case of all goods imported and exported, in the other of the resources used to produce them ; and even if it were practicable the result of such a computation would not be likely to be of much use. It is possible, however, so far as the Terms of Trade are concerned, to measure changes which occur in them from time to time.

[1] *International Trade*, pp. 8—9.

The foreign trade statistics of most countries include index numbers representing the average values per unit of imports and exports, as compared with their values in a given base year. The ratio between these affords a measurement of changes in what Taussig calls the Net Barter Terms of Trade, *i.e.*, the amount of imports received in exchange for a given quantity of exports; if, for example, import prices show a relative rise, this means that fewer imports are received, so that the Terms of Trade have moved adversely to the exporting country; conversely, if import prices have fallen relatively, a greater quantity of imports is received in exchange for a given amount of exports, and there is an improvement in the Terms of Trade. It is possible also to calculate the Net Barter Terms of Trade with respect to particular categories of imports and exports, provided that, as is usually the case, the necessary information regarding changes in their average values per unit is available; for example, the ratio between the average prices of manufactured exports and the average prices of food imports, which is likely to be of considerable importance in an industrial country such as Great Britain. In practice calculations of the Net Barter Terms of Trade, either in respect of a country's foreign trade as a whole or as regards particular categories of imports and exports, are made comparatively frequently, and their movements may often throw considerable light on its international economic relations.

It does not appear to be possible to make direct measurements of changes in the Real Ratio of Interchange, but, as will be shown, it may in certain circumstances be possible to conclude whether or no a movement in the Terms of Trade has been accompanied by a corresponding or a divergent movement in the Real Ratio of Interchange. A change in the Net Barter Terms of Trade shows, *prima facie*, that the relative prices either of imports and exports as a whole, or of particular categories of imports and exports, as the case may be, have altered. The important questions are, however, what other underlying relationships are associated with the relation between the prices of import and export goods, and under what circumstances changes in these relative prices are likely to be accompanied by changes in the underlying relationships also.

There are in fact two other relationships associated with the ratio between the average prices of imports and exports. First, there is the relation between the amounts of labour-and-capital required in each country to produce a unit of those goods which are exchanged

for each unit of the products of the other country. This relation corresponds, though it is expressed in a slightly different form, to Marshall's Real Ratio of Interchange. Second, there is the relation between the average money costs of production per unit of these goods. In equilibrium, changes in this latter relation will correspond with changes in their average prices, that is, in the Net Barter Terms of Trade.

Assuming that there is no divergence between average prices and average money costs of production, under what circumstances will a change in the relative prices of imports and exports be accompanied by a change in the relation between their real costs, that is, between the amounts of labour-and-capital required for the production of each unit of goods?

The answer depends on what is responsible for the change in relative prices. We are concerned here with price changes which endure for a sufficient length of time to bring about whatever movement of resources is necessary to establish a fresh equilibrium. Such changes may come about through alterations in either the demand or supply schedules of imported or exported goods. If either demand schedule has altered, the consequent change in the Net Barter Terms of Trade will be accompanied by a similar change in the Real Ratio of Interchange between the resources used in the production of the goods concerned, since nothing has occurred to alter the amounts of labour-and-capital required to produce a unit of either imported or exported goods.[1]

If, however, the change in the Net Barter Terms of Trade has come about as a consequence of alterations in the supply schedules of either imports or exports, the correspondence between the relation of average prices and the resources used in the production of goods is not maintained; for a change in the conditions of supply will necessarily bring about an alteration in the prices of the goods concerned, and consequently in the relation of import to export prices, even though the relationship between the resources used in the production of the goods may not have moved at all; in any case any change in this latter relationship is practically certain to be different from the accompanying change which has taken place in

[1]This statement is strictly true on the assumption of constant real costs throughout. It requires modification in so far as the production of either imported or exported goods as a whole is subject to diminishing or increasing costs; to the extent that this is so, there is some alteration in the conditions of supply, which will react on both the ratio between the resources used and that between prices.

the ratio of average prices. For example, even though as a result, let us say, of greater efficiency in the production of export goods their relative prices have fallen, so that a greater quantity of them is sent to obtain in exchange a given quantity of imports, it does not follow that the amount of resources devoted to the production of those goods for export, which are receiving the product of a given quantity of resources utilised in making imported goods, and therefore the relationship between the amounts of these resources, has altered.[1] The situation is similar in respect of other changes in the Net Barter Terms of Trade for which changes on the side of supply have been primarily responsible.

This distinction between alterations in the Real Ratio of Interchange between the amount of resources devoted to producing imports and exports, and in the relation between their average prices is of considerable importance in connection with the gain (or loss) which may accrue to a country as a result of changes in its international trading relations, which are represented by changes in the Net Barter Terms of Trade between its imports and exports.

Now the gain (or loss) which a country experiences as an accompaniment of a change in the Net Barter Terms of Trade comes about from two distinct sources. In the first place, it arises from a greater (or smaller) quantity of imports being received in exchange for a given quantity of resources devoted to the production of exports. Secondly, gain may come about through a smaller proportion of the country's resources being utilised in the production of exports; loss in so far as it employs more of its resources in purchasing goods from abroad. Both because of the intrinsic importance of this subject, and because it gives a clear illustration of the significance which attaches to divergence between the Net Barter Terms of Trade and the Real Ratio of Interchange it is worth going into in some detail.

Let us suppose that there has occurred an enduring improvement in a country's Net Barter Terms of Trade, that is, that the prices of its imports have become relatively lower in relation to the prices of its exports than has hitherto been the case. Under what circumstances, and on what grounds, is this likely to represent a gain to the country concerned?

[1] Unless the elasticity of demand for export goods is exactly equal to unity there is as a matter of fact likely to be some alteration in the Real Ratio of Interchange, but it will not correspond with the alteration in the Net Barter Terms of Trade.

There are four reasons for which such an improvement in the Net Barter Terms of Trade could come about ; a movement in demand schedules, either at home or abroad, or correspondingly a movement in the supply schedules of either imported or exported goods.

Let us consider first the case in which there has been a relative rise in export prices as a result of an increase in the strength of foreign demand for export goods. This rise will naturally mean that a larger quantity of imports is received in exchange for a given quantity of exports, and on account of this gain must accrue to the country concerned. Since, *ex hypothesi*, there has been no change in the conditions of production, the improvement in the Net Barter Terms of Trade will be accompanied by an improvement also in the ratio between the amounts of resources used to produce the goods exchanged ; at the same time there will be a tendency for a greater part of the resources of the country in question to be devoted to the production of exports. On this last-mentioned ground some loss will arise, but it will not in general be proportionately nearly as large as the gain arising from the increased amount of imports received and the position as a whole will be one of gain.

The important thing to note is that any movement of resources which may take place is associated with the change not in the Net Barter Terms of Trade, but in the Real Ratio of Interchange. The position is the same throughout : if, for instance, the net Barter Terms of Trade have improved through a falling-off in the demand for imports, there is again a corresponding improvement in the ratio between resources used, and in connection with this improvement fewer resources are likely to be devoted to the production of exports, so that the country will gain in this direction as well as on account of lower prices for the imports which it continues to purchase.

In the case of an alteration in the supply schedules of either imports or exports also it is with movement in the Real Ratio of Interchange that any diversion of resources inside the country will be associated. For example, suppose that as a result of more efficient foreign production there is a relative fall in the prices of imports implying an improvement in the Net Barter Terms of Trade. If the elasticity of demand for imports is equal to unity, there will, however, be no change in the ratio between resources used and no tendency for more or fewer resources to be devoted to the production of exports; it is only if it is greater or less than unity that a movement of

resources with its accompanying loss or gain will be liable to take place ; though there is, of course, unqualified gain so far as the lower prices of imported goods are concerned.

The same applies if the prices of exports rise as a result of less efficient domestic production ; here the Real Ratio of Interchange remains if the elasticity of the foreign demand for them is equal to unity, and no tendency to a movement of resources occurs. In this case whether there is gain or loss to the country concerned turns entirely on whether a larger or smaller amount of resources is devoted to the production of exports, and this in turn depends on whether the elasticity of the foreign demand for them is less or greater than unity, in which case there will be an accompanying alteration in the ratio between the resources used.

In attempting to ascertain in practice whether or not a movement in the Net Barter Terms of Trade is likely to have been beneficial or the reverse to the country concerned it is clearly important to determine in what degree it has come about mainly or wholly as a result of a movement in demand or supply schedules for imports or exports as the case may be, and is consequently accompanied or not by a movement in the Real Ratio of Interchange. While there is no direct test by means of which this can be discovered, there are various ways in which general indications regarding the position can be obtained. First, there is the relative movement of import, export, and domestic prices. A difficulty here is that although most countries publish indices purporting to represent the movement of import and export prices it is as a rule hard to discover one which represents domestic production and consumption alone ; *e.g.*, a general wholesale index includes goods imported and exported as well. A way round this is, however, to some extent provided by the fact that, broadly speaking, each country requires both agricultural and manufactured products, and will tend to import one and export the other. Apart from differences in tariff rates, the rate of interchange between these tends to equality all over the world ; and if we take any country which is a producer of both, such as Canada or the United States, it is possible to ascertain how their relative prices have moved, and this information is likely to throw light on the causation of any movement in import and export prices in the particular country under consideration. Second, there is generally available information of one sort and another regarding changes in the efficiency of production of various commodities, *e.g.*, changes in wage-levels, output per head, the introduction of new processes,

etc., which can be utilised to give an indication of changes in supply schedules, and facts of a corresponding kind regarding changes in taste or wealth will point towards movements in the demand schedules for commodities entering into foreign trade. There is, however, no direct means of computing changes in the Real Ratio of Interchange; and it must be realised that if a country is purchasing a commodity from several different foreign countries, it will have a different Real Ratio of Interchange with each, though the Net Barter Terms of Trade can be calculated for imports and exports generally. The various sorts of information mentioned above can, however, give an indication of when movements in the Real Ratio of Interchange are likely to have accompanied movements in the Net Barter Terms of Trade, though in view of the fact that any such change in the ratio between the prices of imports and exports may be the outcome, especially if it has taken place over any length of time, of factors affecting both the demand and supply schedules concerned, interpretation must clearly be made only with great care and full regard to the circumstances of each particular case.

We may now leave the question of divergences between the Real Ratio of Interchange and the Net Barter Terms of Trade, passing on to consider another sort of possible divergence to which the relation between resources used is not relevant. So far it has been assumed that the average prices of goods entering into international trade represented their average costs of production. This assumption may now be removed, and we may enquire under these circumstances what state of affairs is represented by a movement in the ratio between the prices of imports and exports, that is, in the Net Barter Terms of Trade.

Now this position on the side of supply, in which prices are not representative of costs of production, is that which prevails during the short period. The conditions under which the supply of goods entering into international trade are determined during the short period correspond to those which hold in regard to the supply of goods generally; the movement of commodities takes place not as under long-period equilibrium conditions, on the basis of comparative advantages or disadvantages in production, but as a result of what may be termed *comparative availability* or *disavailability*—that is, the amounts of different commodities which are on hand in the form of stocks or are expected to be obtainable in the near future with the existing stock of equipment, in relation to the immediate strength of demand for them; and movements in their prices reflect changes

in the immediate situation in regard to the conditions of demand or supply, and not changes in comparative costs of production.

In the short period, therefore, movements in the Net Barter Terms of Trade clearly stand for underlying events very different than is the case under long-period equilibrium. They are, in fact, essentially representative of a state of disequilibrium between the supply of and demand for commodities entering into international trade; and such movements tend to occur as a part of general industrial fluctuations, which are practically always associated with large variations in the relative prices of manufactured goods and primary products. Any causes bringing about a substantial immediate change in the supply of or demand for commodities entering on any scale into international trade—for example, harvest variations or industrial disputes, as well as more far-reaching economic disturbances—tend also, however, to lead to short-period movements in the Terms of Trade; though their effects will be counterbalanced as a rule by long-period tendencies, if the prevailing state of affairs is as a whole one of equilibrium.

II

The movements which have occurred in Great Britain's Terms of Trade since the war are of considerable intrinsic interest and throw a good deal of light on the general economic situation in this country during the years in question.

Three successive stages in these movements can be distinguished, corresponding to a different set of underlying circumstances in each case. Two of these, from 1919–22, and from 1930 to the present time, appear clearly, as will be seen, to represent variations of the short-period type; during the intervening period, from 1923 to 1930, there appears to have been some approach to a long-period equilibrium.

1919 to 1922. The movement of the Net Barter Terms of Trade during this period is shown in the following table. The first column gives the ratio between the average prices of all imports and the average prices of all exports; the second column the ratio between the average prices of food imports and the average prices of manufactured exports, which are the most important of the individual categories, and amount, generally speaking, to about 50 per cent. and 80 per cent. respectively of the total in each case. The calculations are made from the official figures regarding the average prices of imports and exports published by the Board of Trade.

Corresponding quarter of 1913=100		Average price of imports / Average price of exports	Food imports / Manufactured exports
1919		87	90
1920	1	87	88
	2	80	82
	3	77	82
	4	76	90
1921	1	66	72
	2	68	73
	3	76	73
	4	75	77
1922	1	68	74
	2	78	87
	3	79	89
	4	81	84

For 1919, the average for the year is used, and subsequently, quarterly figures.

These years cover the troubled period of the post-war boom and slump. So far as the Terms of Trade were concerned, the position was throughout favourable to Britain, in that considerably fewer exports were required to purchase a given quantity of imports than had been the case before the war ; but there was never any approach to equilibrium, and the reasons for its being favourable were not the same at different stages of the boom and slump. During 1919, and the first part of 1920, when boom conditions were in full swing, the main reason was the keen demand for, and general scarcity of, manufactured goods throughout the world ; Great Britain was practically the only source from which manufactures or coal could be procured in any quantity, and her exports could be sold for very high prices, relatively higher even than those which had to be paid for food and raw materials, her chief imports.

With the coming of the slump, which began in the latter half of 1920 and continued throughout 1921, the position altered radically. The fact that the Terms of Trade became even more favourable than hitherto was principally the result of a tremendous fall in the price of imports of food, and an even greater fall in the price of imports of raw materials, while, on the other hand, the prices of manufactured

exports fell very much more slowly, and remained throughout at a relatively higher level than those of imports.

This fall in the price of imported food and raw materials was largely the result of a phenomenon which is often of considerable importance in bringing about short-period movements in the Terms of Trade, namely, the short-period inelasticity of demand for these primary products. The crops of the season 1920–21 were ample ; the demand for food is in general inelastic in face of an increased supply of it available ; the demand for raw materials is extremely inelastic under conditions of slump. When, at a later period, during 1922, the demand for raw materials revived with the recovery of industry, surplus stocks were cleared off and the fall in the prices of imported goods was checked ; and at the same time the prices of manufactured exports gradually returned to a competitive level, considerably lower than had reigned hitherto. The result was an upward movement in the Terms of Trade from the very low levels reached in 1921, to a point at which the amount of exports required to buy a given quantity of imports was about 80 per cent. of that which had been required in 1913. This level reached during 1922 was, as we shall see, to remain comparatively stable for several years to come.

1923 to 1930. The course of the Net Barter Terms of Trade during these years is shown in the following table :

1924=100[1]	Average price of imports / Average price of exports	Food imports / Manufactured exports
1922	92	96
1923	96	98
1924	100	100
1925	101	103
1926	98	103
1927	99	106
1928	102	109
1929	102	106
1930	94	97
1924 in terms of 1913	84	82

[1]The Board of Trade indices were re-weighted in 1924.

As can be seen, the variations in the Terms of Trade from year to year during this period were very slight in the case of the ratio

between the prices of all imports and all exports ; in the case of the ratio between the prices of food imports and manufactured exports they were rather greater, but small by comparison with the violent fluctuations of the preceding period. We may infer from this maintenance of a stable level over a period of several years that the Terms of Trade were once more being determined mainly by the normal long-period factors of comparative efficiencies in production and relative strength of demand ; a position of approximate equilibrium in international economic relations had been reached, and there were no marked short-period fluctuations such as had occurred during the preceding years.

If, however, we compare the level of the Terms of Trade during this period with that which prevailed in 1913, we find that there has been a considerable change, represented by a movement " in favour " of Great Britain to the extent of roughly 15 to 20 per cent. It is clearly of great interest to enquire what circumstances were responsible for this change, and to what extent it could be regarded as advantageous to this country.

What evidence is available suggests that the real cost of production of British exports taken as a whole was not substantially greater than before the war ; but there are various indications that the real cost of production of primary products, which form the greater part of our imports, was substantially less than before the war. For this there are three broad reasons, which can be briefly stated as follows. First, there was in the post-war period an increasing tendency towards the mechanisation of agricultural production, especially in the New World, which was leading to lower costs of production and lower prices ; second, the direction of British foreign trade had largely changed, and large quantities of foodstuffs and other products which had, before the war, been obtained from Europe were subsequently obtained from other sources, mainly from the New World, where their cost tended to be lower ; third, partly as a result of the mechanisation, there was a continuous tendency towards over-production of agricultural products, causing prices to be low and producers, as a rule badly organised, to obtain an inadequate return for their efforts.[1] This last-mentioned tendency is to be considered analytically as a short-period rather than a long-period manifestation, and it was an element of disequilibrium in the situation, though this was as a whole, of course,

[1] *Cf.* Enfield, *The World's Wheat Situatior* ,CONOMIC JOURNAL, December, 19[illegible]1, for an interesting study of various a[illegible]ts of these tendencies.

far more stable than the position which had existed in the preceding period.

It may be surmised, then, that this movement in the Terms of Trade came about in the main as a result of a fall in the real cost of imports, bringing about a lowering of their supply schedule. In so far as it meant that imported goods could be obtained more cheaply than had been the case hitherto, this was an unequivocal advantage to Great Britain. Was there as well any advantage due to movement of resources inside the country? The possibility of realising gain in this direction depends, it has been shown, on the elasticity of demand for imported goods.[1]

Great Britain's demand for imports is, in the main, inelastic. This is certainly the case so far as imports of food, which are the biggest single category, are concerned; for raw materials the case is more doubtful, but in this period at least it is unlikely that elasticity was at all appreciable. The improvement in the Terms of Trade was, therefore, accompanied by a favourable movement in the Real Ratio of Interchange and fewer resources were devoted to the production of necessary exports. But the gain which should have accrued from this was largely nullified by the fact that for various reasons the factors thus set free were not re-employed elsewhere, but to a large extent remained unemployed: so that, paradoxically, this "favourable" movement in the Terms of Trade which should have been of considerable benefit to Great Britain has instead been a principal underlying cause of her chief post-war economic problem, the continuous existence of a large mass of unemployment, chiefly in the export industries.

1930 to 1934. With the coming of the slump of 1930 the approach to a long-period equilibrium in foreign trade relations was destroyed, and short-period conditions, similar to those prevailing in 1919–22, returned.

One of the main features of the slump was a further considerable fall in the relative prices of primary products. This fall has undoubtedly been accentuated by the inelasticity of the demand for food, and also for raw materials in a time of depression—phenomena similar to those noted in the slump of 1921. As the following table shows, it has resulted in a further "favourable" movement in the Terms of Trade, which fell rapidly during 1930, and have since been at a new low level for the past three years or so.

[1]*Cf.* p. 42.

1930=100[1]	Average price of imports / Average price of exports	Food imports / Manufactured exports
1930	100	100
1931	91	91
1932	90	93
1933	87	88
1934	89	89
1934 in terms of 1924	84	86
1934 in terms of 1913	70	71

[1]The Board of Trade indices were again re-weighted in 1930.

Although the Terms of Trade have remained comparatively stable at this low level, the international economic situation generally gives no indication that any position of long-period equilibrium has been re-established. The relative prices of imports are now about 15 per cent. lower than in 1924, and no less than 30 per cent. lower than in 1913. With this state of affairs acute depression in the export industries is practically inevitable, since a correspondingly reduced volume of exports is required to purchase necessary imports. It remains to be seen whether it will last. While the prices of primary products are probably at present at a level which is mainly determined by short-period factors and cannot be expected to continue, there are at the same time the tendencies already mentioned towards greater efficiency and lower costs in their production, and the effects of these may be expected to be permanent. Under these circumstances, it is for this country to bring about the re-orientation in its industrial structure which will enable the resources set free on account of these tendencies to be utilised in other directions, so that it may benefit without qualification, as it normally should, from imports which are cheaper by reason of being more efficiently produced.

JOHN INMAN

OUTLINE OF A SCHEME TO PROMOTE EMPLOYMENT IN AGRICULTURE

WHILE much of the unemployment from which we are at present suffering is due to world conditions over which we have little control, most authorities who are competent to judge attribute some of it to the rigidity of our wage system, which demands for wage-earners in general a higher standard of pay than many of them are worth. The consequence is that the less efficient workers, who are not worth the wages demanded, lose their jobs. If wages stand at a definite figure, an appropriate number of workers will be employed ; if wages be lowered, then, other things being equal, a correspondingly larger number of workers will find employment.

A further consequence follows. The unemployed workers who are compelled to live on the dole are reduced to a lower level of consumption than they can afford when in work. Hence, if they get back into work, the increase of their consumption will tend to raise prices, so fresh production will be called into play and still greater employment will be promoted.

The problem to be solved, therefore, is this. How can we get the less efficient workers back into work without lowering the standard of living of those who are already in employment? The basic idea of the proposals which follow received considerable public notice when advocated some years ago by the late Lord Melchett. His scheme was open to criticism and the same may be true of this one : for that reason it is submitted with diffidence, although an attempt has been made by various devices to overcome all the more obvious objections.

In essence the scheme may be described as a subsidy to the wages of farm labourers. As such it may be condemned outright by some critics as objectionable in principle. We shall return to this point after explaining the nature of the scheme. But too much attention can be paid to theoretical arguments of somewhat doubtful validity. One can be fully alive to the dangers of unforeseen reactions to which the grant of subsidies might give rise without being convinced by the claim, which even economists occasionally make, that work cannot be found for some unemployed persons without displacing others. If that view were to be accepted without qualification, it would be as hopeless to set out to " create work " as to attempt to square the

D 2

circle or to invent a machine capable of maintaining itself in perpetual motion. All development would thus inevitably be blocked, for each new employer setting up in business and so " creating work " would cause some other employer to close down and dismiss his men. But experience proves that precisely the opposite has happened in the past : the employment of additional workers has given rise to additional wants and hence to fresh employment. The impossibility theory cannot therefore be true of all industries, at all times, and under all conditions. Certainly it may be doubted whether it can be true of the agricultural industry at the present time, when so much land, which might bear a rich harvest, remains uncultivated and thinly stocked.

It is also reasonable to point out to those who object to the introduction of subsidies on theoretical grounds, that they already exist in one form or another in many industries, and the eyes of the public should be opened to their implications if they be objectionable. It will suffice to give three examples, two of which are related to Agriculture :—

(1) A considerable number of firms take advantage of the unemployment insurance regulations by working systematic short time. They employ their staff for three days in the week and close down for the remaining three days. Thus each employee gets at least half-a-week's work. But this would not provide the majority of them with a living wage, and they would not readily accept the conditions if their wages were not supplemented by unemployment benefit for the three days in each week when they are off duty. They would be obliged either to bargain for higher rates of wages or to seek public assistance. A woman, for example, may be earning 25s. a week when fully employed. If she gets only half-a-week's work, her wage will fall to 12s. 6d., but, if over 21, she will receive in addition 7s. 6d. unemployment benefit, so that on balance she will be only 5s. down on her week's money and she will have three days free. The procedure followed is so regularised that the claims of the persons concerned are kept in a special register. The firm notifies the Exchange that a certain number of persons will " stand off " on a specified day, it being tacitly understood that they will be taken on again for the same three days in the following week, and this may go on indefinitely. Such workers are included in the statistical returns under the classification " Temporarily Stopped."

(2) It is not unknown for the County Council and the Public Assistance Authority in country districts to come to an arrangement

with local farmers and landowners whereby men who otherwise would be in receipt of relief are employed upon such work as draining fields or cleaning ditches. The farmer pays these men the usual wage for such work and the County Council, on obtaining satisfactory proof of their employment and payment, refunds to the farmer some proportion—it may be as much as 50 per cent.—of the wage cost. Thus, if the average liability for public assistance be 22s. per head, and the full wage paid to the labourer be 31s., there is a saving to the rates of 6s. 6d. for each man employed. Work under this scheme is put in hand in the winter season.

(3) In summer time, drainage schemes have been initiated by Catchment Boards. Where the area of the Catchment Board and the County area coincide the Board may be regarded as a Committee of the County Council. The men required for this work are drawn from the Public Assistance Register, and the Catchment Board precepts on the County Council for 50 per cent. of the estimated cost of the scheme. The county rate is burdened to that extent, but at the same time it is relieved of the assistance which would have to be paid to the men so long as they remained out of work. Such employment is classed as an insurable occupation, and, when the men have worked for a sufficient length of time to qualify for benefit, it is arranged that they cease work. Rates are thus saved at the expense of taxes—Peter pays in place of Paul. Statutory benefit may continue for as long as six months ; transitional payment is then available for men who are judged to be normally engaged in an insurable occupation. Failing that, they apply again for public assistance and the cycle of operations may be repeated.

The proposal contained in this paper is identical in principle with the actual procedure followed in the last two examples just quoted. A multiplication of schemes on these lines would provide the best answer to the complaint, still sometimes heard, that many of the unemployed are work-shy. Some would even like to see a revival of test-work as a condition of the grant of any relief. But the only fair test—and one that all would rejoice to be in a position to impose—would be to offer the unemployed full work at trade union wages in the ordinary labour market. Too often in the past public money has been wasted on the provision of work without any intrinsic value. Instead of trying with false economy, to invent comparatively useless tasks, why not make use of the machinery already in existence for employment purposes? There are farmers starving their land because they cannot afford to hire labour to put on to it ; there are

also men, starving in body and soul, because they are condemned to remain idle. It would seem eminently sensible to bring the two together by giving the farmers a sufficient subsidy to make it worth their while to employ the men.

What is to be the form of the subsidy and how is it to be financed? Let us suppose that a farmer is prepared to guarantee a month's steady employment to a man resident in a defined area, who has been without work and in receipt of continuous unemployment relief or public assistance for at least three months. In such a case it would not be fair to expect the farmer to pay the man the full rate of wages fixed by the Agricultural Wages Board, because in all probability he would not be worth the full rate to him. The suggestion is that the farmer should only be required to pay three weeks' wages for four weeks' work, and that the State should pay for the fourth week out of the resources of the particular fund which was likely to benefit by the employment. The ratio, 3 to 1, here proposed is purely illustrative: it might be necessary in practice for the State to halve the wage bill with the farmer.

Although it is admitted that the man may not be worth the full rate, he is to receive four weeks' work and four weeks' pay under trade union conditions, because with things as they are it would be unjust to assign to him the major responsibility for his inefficiency. It is morally right, and in the long run it should prove economically sound also, for the State to shoulder the whole of the proposed subsidy. This device may go some way to remove the handicap under which the man suffers.

But there is another very good reason why this recruit should be paid the full rate of wages. It is important that the scheme should not be condemned on the ground that it will undercut the pay and bring down the standard of living of the agricultural workers who are already in employment. Hence the State and the farmer, who may be regarded as joint employers of a worker under the scheme, must between them find for him the full rate of pay.

Notwithstanding the fact that the scheme would be financed by the State, public funds would really stand to gain by it. Let us take a concrete case to see how it would work. Suppose a man, with a wife and two small children, has been in receipt of Public Assistance for the last three months to the amount of 32s. a week, and suppose the wage rate of an ordinary agricultural labourer in the area concerned is also 32s. weekly—these are hypothetical but not unreasonable figures taken purely as an illustration. The Public Assistance Committee

would clearly benefit if, by the single payment of 32s., work were found for the man for four weeks. The farmer would also gain for he would be getting a subsidy of 8s. a week towards wages, but the aim would be to make the inducement to the farmer as low as possible consistent with the employment of the man. Assuming perfect adjustment, and all workers under the scheme equal in value, then each unemployed man would be only just worth employing at 24s. a week as compared with the ordinary farm hand, who at the margin of employment would be just worth 32s. A scheme on these lines, if successful, would therefore succeed in promoting the employment of the less efficient worker without reducing the standard of living of the more efficient. The former would produce rather less than the latter, being by hypothesis less efficient, but he would receive the same standard wages. On the other hand, the farmer would get his labour for less than the normal cost, but not for much less than it would be really worth to him.

Granted that, on the average, a worker under the scheme would be worth 8s. less per week to a farmer than the average worker who was not under the scheme, there should clearly be no danger of the less efficient driving the more efficient worker out of employment. But, as an additional safeguard, it is suggested that the subsidy should only be available in respect of labour taken on by the farmer additional to the labour normally employed by him at the particular season of the year in question. It will be generally agreed that all farmers and their households in an agricultural area are fairly well known to their neighbours, and it should not be an impossible demand that a farmer preparing to take on a worker under the scheme should be required to fill in a form—with the supporting witness possibly of another resident in the same parish—stating the number, the names and the home addresses of his men servants at the date of application and twelve months before that date, giving the reason for any difference between the totals. For any proved misrepresentation a heavy fine might be imposed. But assuming the local Employment Committee was satisfied that no attempt had been made to defeat the purpose of the scheme by dismissing one man in order to get a cheaper worker in his place, then arrangements could be made for a selection of suitable candidates to be sent to the potential employer from the local Employment Exchange for his consideration.

A further qualification should be made: no farmer should receive the subsidy in respect of the same worker for a longer period

than three months, although after the expiration of that time he should be free to engage another worker under the scheme in place of the one whose term had ended. The purpose of this would be to prevent an unnecessary and indefinite continuation of the subsidy. Any unemployed worker capable of resuming employment with a subsidy for as long as three months should stand a fair chance of regaining his industrial footing as an unsubsidised worker. Moreover, the three months' fresh experience in itself should have a definite market value, and one might reasonably hope that some farmers would wish afterwards to retain such men and be willing to pay them at the full market rate for their services. On the other hand, there is no doubt that some workers even after three months' service would still be regarded as not worth the full trade union wage. These men should be available again for employment under the scheme but only on the usual terms, that is, if and when they had been in receipt of unemployment relief or public assistance for a period of three months. That period would be a testing time for them during which, if fortunate, they might succeed in securing unsubsidised work by their own efforts. But, assuming they failed, it is better they should get subsidised employment than be without work altogether.

To summarise—it is submitted that all three parties to the scheme would stand to gain if it were given a fair trial, the unemployed worker, the farmer, and the State. The unemployed worker would clearly gain if honest work could be found for him at a fair wage in exchange for mere idle existence on the dole, and that without detriment to the wage standards of those already in employment. In addition, the scheme as devised should be a definite encouragement to those who have been without work for a long time, once given a trial, to exert themselves to rise again in the industrial scale.

The farmer should gain because, with reduced labour costs, it should prove profitable to him to bring fresh land into cultivation or to stock his farm with a larger number of sheep and cattle, pigs or poultry. At present he employs one or more skilled men, and he pays them at the full rate fixed by the Agricultural Wages Board; at the same time he might be glad if he could get additional but less skilled labour at rather a lower figure. Under the scheme this would be possible.

The State would gain by the transaction the difference in hard cash between 8s. and whatever it costs to maintain an unemployed man and his family on unemployment relief or on public assistance.

This, it is hoped, would be multiplied many times, according to the number of men-weeks of employment provided under the scheme.

It will be said that, sound though the arguments in support of the scheme may be, difficulty in putting it into execution would be great because the farmer would be too conservative to take advantage of it. That difficulty must be acknowledged, but it need not be regarded as insuperable, because the farmer though a strong individualist is no fool where his pocket is concerned, and if the case were put to him clearly and cogently his support could be won.

But there is another difficulty of a theoretical nature to be faced. It is described as theoretical because it is by no means certain that it would arise in practice. If the scheme were successful, in the sense that more employment was provided, both production and consumption of food-stuffs would be increased, but the increase in the former *might* at first be greater than the increase in the latter. This might happen because some men, previously unemployed (and therefore consuming but not producing) would now be at work (and consuming rather more but not a great deal more). On the other hand, it must be remembered that these newly employed workers, having now larger incomes, would spend more on goods other than those which they produced. The people from whom they bought these other goods would, therefore, also benefit, and would, in turn, buy more food. It follows that we cannot be quite sure whether the supply of farm produce would or would not, at first, exceed the demand. If it did, then prices would tend to fall. Lower labour costs per unit of production would have the same effect. This would be a good thing for the consumer, but not for the farmer. But, if prices fell, consumption for that very reason should to some extent certainly rise again, and it is conceivable that the ultimate rise in consumption might suffice to offset the fall in price. It is just here, in estimating the reactions to the scheme, that a slight element of doubt enters into the theory and it is desirable not to minimise it, because it is clear that the object will be defeated, if, as a result of employing more labour, there is over production of wheat and other commodities, their prices then drop, and the farmer is obliged to meet the situation by ceasing to cultivate some of his land and dismissing some of his workers. We should thus be back again at the point where work is created for some at the expense of others.

Those who put their faith in tariffs and quotas would no doubt suggest that we could avoid this dilemma if we got rid of the extra food produced at home by buying less from abroad. But that would

be no remedy, for if we reduced our imports, our exports too would fall, and, therefore, we should be putting out of work some who are engaged in manufacturing goods for the export trade.

But does not this prove too much? For, if it be true that extra production will only result in lower prices and hence in reduced production at some other point of the field, does it not at the same time seem to indicate the futility of any agricultural research which has the effect of producing two quarters of wheat or two cwts. of potatoes where before only one was produced? And are we to cry woe unto us also if any new machinery is invented which multiplies many times the output of commodities per unit of effort? To that there is only one answer. Sooner or later we have got to face up to the fact that there has been, and there is still going on, a revolution in production which in the experience of this generation is without parallel. That is one of the main reasons why industrial conditions are so much out of joint. There are two ways of meeting the situation. We can let the machine grind on without control. In that case, when the crops are ready, if they prove greatly in excess of the demand and we cannot afford to let prices drop, we can either destroy them—a device actually adopted by some countries, but one which still shocks all thinking people—or we can store them. Storage of the surplus would imply government purchase and the regulation of prices.

While that may have something to recommend it, it would surely be better to attempt to control the machine so that production does not get out of hand. This implies first the careful collection and analysis of statistics of the production and consumption of all important commodities, so as to differentiate between industries in which there is a wide margin for the expansion of employment from those which are already over-stocked with labour, with a view to the diversion of fresh recruits into the most appropriate field at work. But that is only the first step. To make it really effective the State would inevitably be obliged to control the production of new credit, the object being to ensure that just sufficient credit should be available to bring back into employment all those who want work and are capable of it. Credit should always keep pace with production—too much or too little spells disaster. That, however, introduces a large subject which cannot be discussed in this article.

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A NOTE ON THE RELATIONSHIP BETWEEN ECONOMICS AND PSYCHOLOGY

IN a recent issue of this journal, Professor Robbins has made some "Remarks on the Relationship Between Economics and Psychology," which display his usual perspicacity and clarity.[1] Professor Robbins admits that his paper is not a systematic treatment of the subject, and with the bulk of his conclusions I am heartily in accord. This brief note aims merely at pointing out some of the places where his discussion is not completely satisfactory, and at showing where further discussion is necessary.

The modern theory of value, says Robbins, "involves nothing more than the assumption that the economic subject *can judge* whether the significance of *A* to him is greater than, equal to, or less than that of *B*." (My italics.) This assumption, however, is drastic enough. It implies that the choices relevant to economic equilibrium are *conscious*, and based on *pre-consideration* of the resulting satisfaction. This premise constitutes a very shaky foundation for a science. How do we know that the majority of choices are so made? There is no conclusive evidence—psychological, statistical, or logically deduced—which establishes the above assumption as fact. What psychological evidence there is demonstrates that a large percentage of human behaviour is unconscious and impulsive.[2]

Lest I be classified among those "intellectually sterile" persons who accept Behaviouristic doctrines from "a desire to be in fashion," let me hasten to assert that I am not a proponent of any particular school of psychology. I only believe that there are some principles common to all schools which must be recognised by economists, including the existence of unconscious or impulsive motives to action. Secondly, I do not consider it safe to count on Behaviourism or any other theory of motivation being discredited, when there is

[1] THE MANCHESTER SCHOOL, *December*, 1934.

[2] *E.g.*, McDougall, *Introduction to Social Psychology*, pp. 10—11, "mankind is only a little bit reasonable, and to a great extent very unintelligently moved in unreasonable ways." K. Young, *Source Book of Social Psychology*, p. 146, "the man in the street, the ordinary citizen, the usual student, imagines that what he does is done from a simple rational motive, that he 'makes up his mind' and then goes ahead to do the pre-determined action. Through the work of Jung, McDougall, Wallas, Freud, Adler, and others, we know that this simple rationalist method is thoroughly fallacious."

a possibility that any one of them may subsequently be established as essentially accurate. We must, and I think we can, make the subjective basis of *pure* economic theory so independent of "psychology" as provided by the "Fachpsychologen" that the incontestable proof of any particular psychological theory could only assist us in future development, and not necessitate radical revision of extant conclusions.

I agree with Professor Robbins that to deny the possibility that introspection might yield useful results is "a form of teetotalism inappropriate in scientific enquiry." On the other hand, dependence on purely introspective data would seriously endanger the position of economics as a science.[1] Since we do not know exactly in what fields introspection is satisfactory, we must confine ourselves almost entirely to *observed* choices. I see no reason why, if the terms are clearly defined, "a theory which explains the pricing process in terms of scales of choice will not be *understood* in terms of externally observed behaviour only."[2] Nor does this treatment neglect the influence of expectations. Expectations and anticipations can affect the equilibrium position only in so far as they influence *present choices*; that is, in so far as they affect relative marginal significances at any one time. It is obvious that choices *actually made* are the only ones which are important to economics. It is also true that the choices actually made may diverge from those we *think* we will make. We may plan to buy a blue tie rather than a brown one, but when actually presented with the alternatives, we may choose the brown one. We do not know which alternative is "preferred," in the sense of being most influential on behaviour, until the choice has actually been made; and the individual making the choice does not know either. We must therefore think of our relative scales or indifference curves as being drawn up on the basis of observed choices, made in such a way that other conditions do not change in the meantime. Expectations, if they exist, will influence the choices made in a certain direction.

Professor Robbins confesses that economists assume "rationality" in the sense of "consistency of choice," but he does

[1] Dashiell, *Fundamentals of Objective Psychology*, p. 12, "for the psychological investigator the self-observations of the subject are only of auxiliary value. . . . He may conscientiously give one reason for his conduct toward a person, whereas careful analysis by laboratory technique may bring to light another and quite different motive. . . ." Woodworth says of introspections, "they are of no service in a minute analysis of experience." (*Contemporary Schools of Psychology*, p. 42).

[2] Robbins, *Op. cit.*, p. 97.

not seem to be particularly worried by this fact. In fact we do not know that this consistency exists, nor have we any way of finding out. We cannot in this case resort to actual observance of choice, since the order in which the alternatives are presented will influence the individual's behaviour. If we could find three individuals whom we knew to be absolutely identical, and simultaneously present each with one of the three combinations (A and B, B and C, A and C), then and then only could we get the results we want. I don't think there is much hope of making such an experiment.[1]

The fact that psychology has not provided us with sufficient data for predictability so far is no reason for us to conclude that it will never do so. After all, economists have not tried very hard to find out what psychologists can do for them. It is no doubt true, as Robbins points out, that economists are not in the habit of consulting text-books on psychology to help them with their problems ; but it may also be unfortunate. Will a " Buy British " campaign carried on under certain conditions succeed in sublimating the desire to get the best bargain or not ? It is the psychologist who is most likely to find the answer.

Indeed, Professor Robbins seems to use the term " economics " as a synonym for " pure economic theory." It is true that pure economic theory can be made independent of psychology. We can develop a theory of equilibrium in subjective terms which is absolutely impregnable on psychological grounds. We cannot obtain a similarly secure theory in objective terms which will be applicable at all times and in all places. Nor do we need to do so ; in applied economics we are confronted with problems concerning particular times and places. By discovering what assumptions are relevant for such a particular application, we can translate our general subjective laws into objective terms for that purpose. It is in determining what assumptions *are realistic* for the time and place in which we are interested that psychology, and all the other social sciences, can be of the utmost value in solving economic problems.

B. H. HIGGINS

The London School of Economics,
February, 1935.

[1]Since no commodity is divisible to the extent necessary to make the law of equalisation of marginal utility hold, this additional difficulty is perhaps not very important. On the other hand, it should be pointed out that even when continuity is assumed, the existence of contemporaneous inconsistencies of choice makes the indifference-curve analysis meaningless.

REVIEWS

The Book of the Stock Exchange. By F. E. ARMSTRONG. (Pitman. pp. 405. 10s. 6d.)

THE exchange of stocks and shares demands a good deal of explanation if it is to be an intelligible process. It is the merit of this book that it takes little for granted and leaves little undiscussed. The author describes the domestic organisation of the Stock Exchange (devoting attention to the provincial exchanges), explains the reasons for its existence, the different kinds of business transacted and the operations by which a bargain is completed. In addition, he has something to say on the investment merits of different classes of shares, on the reactions of the depression and the relations between the exchanges of the world. To many having an acquaintance with the principles and broader facts considered, the detailed story of what happens within the exchange and brokers' offices, during the account and at settlement, will give much new information. Apart from the interest in seeing what machinery quite a small commission can set in motion, this description should prove valuable to those who, for business reasons, have more interest in dealing than in investment in stocks. The student will be particularly grateful for a very clear account of such less easily understood facilities as options and continuations, and of the different classes of shares and the distinctions between them.

Mr. Armstrong seems to be somewhat complacent in discussing the value of the Trustee Act of 1925, but can hardly be blamed for the following advice (published in 1934): "people with limited means should confine their attention to stocks that fall within this (trustee) class." Many economists must feel not at all satisfied about the whole question of stocks eligible for investment by trustees.

This is a small matter: this is merely one of the many points which the author touches upon. For its primary purpose, this work can be recommended; no other book with which we are acquainted gives such exhaustive information in such a simple way.

J.S.

Gold Reserve and the Monetary Standard. By D. S. Edwards. (P. S. King. pp. 148. 5s.)

This book presents a survey of the events which preceded the gold *débâcle*, and generally considers the problems inherent in any currency system with gold as its base.

The author claims that international trade demands stability of the foreign exchange rates and he sees no other method of attaining this than by some link with gold. He is convinced that any attempts to revive the old Gold Standard will be doomed to failure, so he boldly outlines a Modified Gold Standard. Many of his proposals are, at least, controversial. The Currency Board, to take but one, may be assailed on several grounds, irrespective of the doubt that may exist as to the need of such a Board. His idea is that the members of the British Commonwealth of Nations should join together in an association, not necessarily too rigid, for the maintenance of stable exchanges between members. For this purpose he would have Commonwealth members on his Currency Board so that a common policy for the Empire could be pursued. The fact that he would invest them collectively with a bigger voting power than that of the U.K. members, would remove any grievance they might have about this country dictating policy. This is, of course, a fallacy ; for the U.K. members are to have eight votes and the Commonwealth members eight. Assuming that unanimity prevails among the British members, they have only to obtain one vote from the Dominions to obtain a majority. Would India consider that one and a half votes out of seventeen would be sufficient to safeguard her currency interests? As regards the British members, one notes with interest that the Royal Economic Society, the Royal Statistical Society, the London School of Economics, and the Faculty of Economics, Cambridge, should be allowed four members. Is the industrial North not interested in currency problems, or has it nothing of value to contribute to their solution?

Perhaps this is but to quibble at details in which Mr. Edwards is, perhaps, unduly interested. The book as a whole may be welcomed as a contribution to a problem that will have to be faced sooner or later. It may be that in some of the suggestions contained in the book, inspiration will be found when the necessity for framing a new currency system arises.

N.R.H.

Monetary Opinions and Policy, 1924–34. By MARY T. RANKIN. (P. S. King. pp. 161. 6s.)

Theories of the Trade Cycle. By ALEC L. MACFIE. (Macmillan. pp. 198. 7s. 6d.)

The Dollar, the Franc and Inflation. By ELEANOR LANSING DULLES. (The Macmillan Company. pp. 106. 5s.)

THE first book is a collection of a series of addresses and papers, for the most part concerned with the depression, whose subject-matter is indicated by the book's title. Dr. Rankin's criticisms of policy and opinion are uttered from a stand-point now unorthodoxly orthodox. The monetary legislation of 1925 and 1928 is compared, to its disadvantage, with the Bank Charter Act of 1844. The Macmillan Report is adversely commented upon for its hankering after " management " and its proposed alterations of the constitution of the departments of the Bank. " No clever financial theories should be allowed to hide from the British trader that he must bring down his costs " (p. 92). Dr. Rankin is much concerned with " a persistent and growing divorcement of finance and industry " which she sees in the inefficacy of bank rate, and which, in its turn, seems to result from the abandonment of gold circulation. It will thus be seen that Mr. Keynes receives some hard knocks. One theme recurring through this selection is evidently regarded as extremely important by the author—that the price of our goods should not, but does include, " the costs of the European War." Altogether this is a very puzzling book : many welcome very readily a distrust of monetary management, but for our own part we cannot welcome distrust that is careless of the part we know that money plays.

MR. MACFIE has designed an introduction to such theories of the trade cycle as students will find difficult to attempt unaided. Whether the time is yet ripe for a book of this kind must be a matter of opinion. Controversy continues, and at times differences in principle between protagonists seem to turn around matters of apparent detail on which the masters cannot agree. There are many difficulties in reconciling conflicting theories, yet, as Mr. Macfie indicates, it is desirable in such a work to find some common ground. It is not, we think, unfair to say that the author is sympathetically inclined to the Austro-London School, without however indicating the major difficulties found in accepting such a standpoint. The work is as simple as, but not more simple than, an introduction to

this subject should be ; its readers will find it helpful in following the authors introduced.

Dr. Dulles discusses French experience during the inflation and stabilisation. Essentially this is a tract upholding the dangers and futility of currency depreciation, and the occasion inspiring it is the soft money policy of the Roosevelt Administration. Save on the matter of debt, the French situation is not compared with what has been happening in the U.S., for that is not discussed. References to the dollar are merely admonitory, so that the title is a little misleading.

J.S.

Credit and International Trade. By Barnard Ellinger. (Macmillan. pp. 189. 8s. 6d.)

This is a book few could have written and many would have been glad to write. Only on reflection can one appreciate the knowledge and care that has gone to build up a work of so simple a pattern.

Two useful purposes are served : on the one hand, the stressing of the fundamental unimportance of money, and the importance of credit, particularly in international trade. On the other, explaining and illustrating the different ways in which credit is provided by various institutions in the sale of goods between countries of varying development. How Hezekiah Godbehere's cotton, grown in Mississippi, profits him by being instrumental in the purchase of a brush, fashioned with Chinese pig bristles, is a long story. It introduces us to the negro croppers of the Southern States, the cotton men of Lancashire, Mrs. Wu and Mr. Wu's shirt, the tea planters of China, the farmers of Manchuria and the dairy industry of Denmark. By what intricate and devious means Hezekiah's and Mr. Wu's simple wants are satisfied, how many the financial transactions unassuming tastes call into existence, is the tale Mr. Ellinger tells. And as it is told, we come to appreciate the merchant's function, we come to learn what part bills of exchange, confirmed credits and bills of lading do play in international trade, and, hence, in our daily lives. Those to whom international trade brings recollections of bales of *X* and yards of *Y* will do well to clothe the skeleton of their understanding in the generosity of Mr. Ellinger's experience and kindly wit.

One particularly valuable feature is the inclusion of reproductions of documents drawn in the financing of trade. With their aid

alone it is possible to draw up an intelligible account of the process the author describes, while they provide a most instructive supplement to the text. One hopes that the publishers may find it possible to issue a cheaper edition in which these valuable features are retained, for this is a study one would like to see easily accessible.

J.S.

The Economics of Advertising. By F. W. TAYLOR. (Allen and Unwin. pp. 248. 7s. 6d.)

THE influence of advertising on the economic system has important consequences : one which needs further discussion is its reaction in making conditions of imperfect competition more widespread. Perhaps this should have been added to the criticisms of advertising which, in Mr. Taylor's hands, make an impressive showing. As the book indicates, it is not an easy matter to present convincingly advantages whose existence may easily and generally be admitted. Advertising may stimulate wants and insure against a needless unemployment of willing resources, it can be informative and link the producer with his customers ; it may also exert under some circumstances a steadying influence upon demand, and prove a potent weapon towards quick expansion in the hands of the efficient. No doubt, these are important ; perhaps only the absence of advertising could show how valuable. Yet their weight seems seriously to be reduced when one considers, with Mr. Taylor, advertisement's perversion of demand, its appeal to the chaotic content of our scheme of preferences, and its part in the deliberate misguiding of the public. When one comes to look at the bill, as is done in a suggestive glance at advertising costs to the community, it appears doubtful whether consumers have not found yet another strange variety of want. Altogether, this is a very entertaining and thought-provoking book, though one may doubt whether the title is a happy one.

U.S.S.R. ECONOMICS—FUNDAMENTAL DATA, SYSTEM, AND SPIRIT

I am giving a rough outline of U.S.S.R. economics as I see it after repeated visits to the country, followed by a study of some most prominent official documents. While I claim no accuracy of detail I feel that the outline is sufficiently certain to base reasonable conclusions on it. Practically all the data I have quoted are to be found in the publications listed in the Appendix.

The present moment appears to be, for various reasons, a favourable one for taking stock of the achievements of the Russian Revolution. The consolidation of Stalin's dictatorship has drawn a clear line between Communism and Socialism, definitely instituting the latter and relegating the former to an uncertain future. The marked improvement in economic life during the last year or two makes one feel sure that this Socialism is to be a permanent result of the Revolution. A picture, drawn correctly at the present moment may, therefore, possibly forecast the ultimate meaning of the Russian upheaval.

There is also a new technical point : the recent introduction of a marketing system has made it much easier to review the economic situation. An open-market for all consumers' goods is becoming the only channel of distribution. We can now estimate a price level and compute values in terms of money. Moreover, the rapid spreading of the market also seems to show the way to the establishment of an economic system superseding the present inconsistencies.

The Communist revolution broke out six months after the overthrow of the Tsar. In the course of this revolution all means of production, including land and town dwelling houses, became state property ; trading was prohibited ; every worker was to be provided with a ration of food and other goods ; labour was to be militarised by general service ; food was requisitioned from the peasants. Communism broke down in famine and was repealed by Lenin in March, 1921.

In 1921 Russia largely returned to private capitalism. The New Economic Policy left all but the main industries to private persons, thus restricting itself to a direct control of about 10 per cent. of production. Apart from this reservation the communists reigned in a non-socialist country, and lived on its revenues. The situation, which naturally could be an armistice only, was brought to an end by the year 1928. That year marks the starting date of the First Five Years' Plan, which is claimed to have been accomplished in four years and a quarter. Its period is officially counted from the last quarter of 1928 to 1932. The Second Five Years' Plan runs from 1933 to 1937.

I

The Social Body

Size and Constitution.

The 165 million inhabitants of the U.S.S.R. are sharply divided into a rural and an urban population. Of the 40 millions living in the towns, the vast majority are paid by the Government. They form the basis of its power and are engaged in administration, banking, trade, industry, postal, railway, and tramway services, teaching and health protection, newspapers, science and arts ; of these 5·5 million are office employees and 9 million factory workers. Another 3 million not fully occupied persons in the towns are in receipt of incomes from the state. Of these about 0·5 million are university students, and about 1·5 millions study part-time at technical schools. About 1 million might be counted as disabled by illness, infirmity or old age, who are in receipt of subsidies. 1·5 millions of the townspeople form a separate economic organism ; they are handicraft men, members of collective enterprises for tailoring, shoemaking, hairdressing, called *artels*, in which the workers are partners running the business on joint account. These 19 million earners provide for another 21 million dependants.

About 125 millions live in villages. A considerable section, about 10 millions, are state-paid workers and their dependants. More than half are on the state farms, the rest being mostly engaged in forestry and fishing. The rural population lives in 25 million farmsteads. By the end of 1934 70 per cent. of these farmsteads were collectivised, forming 230,000 *Kolchoses*, with an average of 75 farmsteads. Six to seven million farmsteads were still independent but they are in the course of being merged in *Kolchoses*.

Food.

While the population of the U.S.S.R. exceeds by 30 per cent. the numbers inhabiting their territories before the war, the production of food has failed to keep pace with this increase. Grain-crops which, during the First Five Years' period, had fallen low in consequence of internal struggles, have in 1933 and 1934 reached a level exceeding by 12 per cent. the pre-war production. In these years 90 million tons of grain[1] were harvested as against 80 million tons in 1913. If, however, we consider that 10 million tons of grain were exported before the war, while there is no exportation at present, we find that the grain provision per head of the population has again reached the pre-war level.

Most of the foodstuffs in the U.S.S.R. are made from cereals. The main accessories to this are potatoes, meat, fish, milk, linseed oil and sunflower oil. Potatoes increased from about 20—25 million tons in 1913 to 51 million tons in 1930. Meat and milk production have greatly decreased owing to the slaughtering of live-stock during the period of collectivisation. In 1933 there were 38·6 million cattle, 50·6 million sheep and goats, and 12·2 million pigs. This is about half of the live stock in 1916. The yearly production of fish was 1·3 million tons in 1933.

No direct evidence is to be found for the net production of meat. An estimate can be based on the live-weight of slaughtered animals from cattle- and swine-raising state farms as compared with the stock of these farms. The average weight of slaughtered animals and the railway transport figures supply further evidence. On this basis an estimate of 1·5 million tons for the net meat production appears to be a liberal figure.

The above figure for cattle includes 19 million cows ; since a cow in Soviet Russia produces an average of 700 litres of milk in a year[2], the milk production must be about 13 million tons. Linseed production is as pre-war, 0·7 million tons ; in addition, 2·3 million tons of sunflower seeds were produced in 1933.

Considering the low nutritive value of potatoes and especially their lack of protein and fat, the increased production of potatoes

[1] The detailed figures given in million tons are : rye 20, wheat 30, barley 7, oats 19, corn 4 ; 10 million tons are not specified, they include millet and similar crops of lower value.

[2] This remarkably low figure is given as an average for cows in state farms in 1933. (The average annual yield of a milch cow in Germany is 2,300 litres.)

is more than offset by the decrease in meat and milk. On balance, the nutritive value of food provided per head of the inhabitants of the U.S.S.R. has suffered a not inconsiderable reduction as compared with the pre-war level. Assuming that the whole of rye, wheat, barley, and oats, are used for human food while corn and other cereals are used for feeding animals, and deducting 12 per cent. for re-sowing of grain and potatoes, we obtain as the average daily ration of an inhabitant :

	Grams.	Protein (digestible)	Fat Grams.	Calories.
Grain	1,100	75	14	3,200
Potatoes	820	13	1	630
Dairy products ... ... (expressed in milk)	110	4	4	85
Linseed oil and sunflower oil...	11	—	11	105
Meat and fish...	42	8	4	100
		100	34	4,120

The caloric value is ample and the protein quantity is almost adequate, but of inferior quality, the fat ration is deficient ; the slaughtering of live stock has had a serious consequence in this respect, which it will take a considerable time to repair. On the whole, the average ration, mainly consisting of cereals and potatoes represents great poverty which, however, is quite common and is even greater in oriental populations, such as Japan's.

The figures calculated above happen to agree with the data obtained by a Soviet enquiry into the food consumption of a specific *Kolchos* in 1931. They are : proteins 113 g., fat 35 g., calories, 3,800. It is stated by a socialist writer who described the same village in 1907, that the food was then much poorer. It is obviously impossible to argue this point ; all we can say is that the average food supply per capita was somewhat better in 1913 than it is now, and that it was very poor at any time.

Collective Food Production and State Levy.

The description of two villages, Nowo-Shiwotinnoje and Mochowatke, before and after the revolution, which gives the data to which reference has just been made, is a helpful document. The villages lie in the fertile district of Woronesh near the Don, not far

east of Charkow. Their *Kolchoses* " Red October " and " For the Soviet Power " have earned distinction for their successes. From the data given, we find that the state levy on grain in 1931 was more than 42 per cent., and in 1932 more than 56 per cent. of the net production.[1] For 1933 Stalin states that the levy raised from collective farms alone was more than 16½ million tons. In this year of much improved harvest, this levy corresponded to 26 per cent. of the gross production, or (making, as above, a deduction of 25 per cent. for re-sowing and feeding) 35 per cent. of the net production.

While a considerable part of the grain production is thus taken (without compensation) from the land, mainly to feed the 40 million townspeople, potatoes and milk are mostly left to the farmers. In consequence they concentrate their efforts on their little private plots of land (0·25—1 hectare) which, by law, are given to them and on which they grow potatoes. A valuable source of food, is the cow, which each *Kolchos* family is permitted to own, and about 60 per cent. of the families actually possess, for it yields about 2 litres of milk per day. When in pursuance of the Government order of August 18th, 1935, thirteen of eighteen families not owning a cow were each presented with a calf by the *Kolchos* " Red October," a woman burst into tears, saying : " We never dreamt that we would yet become prosperous farmers ! "

The description of Nowo-Shiwotinnoje and Mochowatka shows that even in a successful *Kolchos* the peasants give more than half their work to their private plots and derive about half their food from them.

Food in Towns.

The urban population is fed mostly on bread and other cereal products. The bread is mainly from rye and wheat, the milling being 95—97 per cent. in both cases.[2] The price of this bread is fixed by the State. In Moscow 1 kg. of rye bread costs 1 rouble ; 1 kg. of wheat bread costs 1·1 roubles. The same price is fixed for all the more important parts of the U.S.S.R. Other foodstuffs can be bought directly from the peasants or, at identical prices, from Government stores. The price level for these marketed foodstuffs

[1] The grain freights of these years give support to a generalisation of these figures.

[2] In England milling flour is about 68 per cent. ; during the war milling was tentatively increased in England up to 90 per cent.

corresponds approximately to present British prices, if 10 roubles are taken as an equivalent to 1 shilling.[1]

Income from Agriculture.

An estimate of the pre-war (1913) national income of the territories of the U.S.S.R., quoted by Soviet authorities, amounts to 20 thousand million roubles, corresponding to about £2,100 millions at pre-war parity, and about the same figure at the present day. Of this amount, 11·6 thousand million roubles, *i.e.*, £1,200 millions were derived from agriculture. We cannot analyse this estimate here, but it is easily seen that it is in harmony with the figures given above for the agricultural production.

Housing in Villages.

The 25 million farmhouses, in which about 125 million peasants live, shelter an average of five persons. The Russian term *isba* is mostly translated as " hut," and in general this is an appropriate term. A description of Nowo-Shiwotinnoje and Mochowatka, dated 1901, informs us that 70 per cent. of the *isbas* measured 21 square metres (225 sq. feet), the others being somewhat larger. The average occupancy of these *isbas* was then seven. The new *isbas* built in these villages during the following twenty-five years were somewhat larger and of better quality. The number increased from 167 (1901) to 225 (1926). The *isbas* the floors of which were naked earth, numbered 83 in 1901 and 81 in 1926. But whilst only two *isbas* had four windows in 1901, there were twenty such huts in 1926. The wooden huts decreased from 63 to 32, the others being built of stone and bricks. Thatched roofs were generally substituted by roofs of iron sheet.

From 1927 up to 1933 no construction of new dwelling houses is reported in this account. In the period of strife, which accompanied collectivisation, there seems to have been little dwelling-house construction in any of the rural parts of the U.S.S.R. Since, however, the increase of population was, during this time, largely taken up by the cities, there was no very considerable increase in the rural population either. Taking the *isbas* of the two villages described in the account as a fair example of rural dwelling-houses in general, we estimate that a Russian *isba* to-day gives a shelter of about 4 sq. metres per head as against 3—3½ sq. metres per head at the opening of the century.

[1]This equation holds for meat, white bread, butter, eggs, fat and finds support in the value of the " Torgsin " coupons. (See footnote on page 75).

Housing in Towns.

Up to the commencement of the First Five Years' Plan the population of the cities had increased by three millions as compared with 1914. The figures were 24·7 millions (1914) and 27·6 millions (1926). Housing conditions had considerably deteriorated owing to the decay of town houses during the revolution. In 1928 the dwelling floor space was 162 million sq. metres giving about 6 sq. metres per head. In a number of industrial districts the housing conditions of the workers are reported to have been very much worse than the average, namely 3 sq. metres per head of the population. The Five Years' Plan looked to an increase of the town population by 7 millions and intended an increase of 42 million sq. metres. The actual increase of town population during the Five Years' Plan period was by 11 millions (to 38·7 millions) whereas only 22 million sq. metres were built. The result was a reduction of the floor space per capita to less than 5 sq. metres per head.

Thus the housing of the workers which, according to a Soviet writer, was in 1928 " more terrible than those described by Engels during the Industrial Revolution in England," suffered a drastic deterioration during the following four years. The Second Five Years' Plan holds out the hope of an increase of the floor space per capita by 15 per cent. Official sources complain of the poor quality of the new buildings, as well as of the still unrepaired condition of many old houses. On the whole, the average housing in the towns seems to be but little better than the shelter given by *isbas.*

Wages and Urban Income.

The average monthly wage of a state paid person is given for 1933 at 130 roubles ; the average monthly wage for a factory worker being 127 roubles. Figures given for 1934 with respect to heavy industries show that the wage level did not alter in that year. Recently, however, an increase of the pay-roll by 4·2 billion roubles was made, accompanying the abolition of the bread card and as a compensation for the increased expenditure on bread. This sum spread over 23 million state paid persons gives an addition of 15 roubles to the average monthly wage. The industrial worker's average wage is now 142 roubles per month. On the average a holiday of 15 days is granted to a worker every year.

The following table gives an estimate of the various items of expenditure covered by this wage. I have also attempted to estimate

the cost at which the same, or similar goods and services, as purchased by the factory worker in the U.S.S.R., might be obtained in England.

MONTHLY INCOME AND EXPENDITURE OF A FACTORY WORKER (AND ONE DEPENDANT) IN U.S.S.R.

Heading.	Roubles.	Value in Great Britain in shillings.	
1. Deduction for state loan.[1]	7		
2. Rent for 10 sq. metres of dwelling floor space.[2]	5	12/–[3]	
3. 30×3 fares at 10 kopeks	9	3/–[4]	
4. 25 meals in the factory at 70 kopeks ...	18	12/6	(assuming 6d. per meal)
5. 30 daily rations of bread. (96 per cent. milling) = 30×1·5 kg. at 1 rouble	45	11/–	(assuming 3d. per kg.)
6. Fuel for heating 10 sq. metres of floor space, fuel for cooking, and lighting ...	8	4/–[5]	
7. (*a*) Food other than bread ... ... (*b*) Industrial commodities. ... ... (*c*) Books and newspapers	50	10/–	(*vide infra*).
	142	52/6	

The last item of 50 roubles, which I have valued at 10/–, is of special importance, since it includes all purchases of industrial manufactured commodities. I have already mentioned that for other food than bread in April, 1935, the rouble buying power was expressed by the equation 10 roubles = one shilling. The same equation holds on the average for manufactured commodities purchased in the warehouses. However, there is still some distribution of manufactured goods through the now rapidly disappearing co-operative shops. At the same time, the price level in the open shops shows a falling tendency. I have, therefore, given the 53 roubles the value of ten shillings, thus adding a margin which may

[1] Calculated from increase of State loan holdings by state paid persons between January 1st, 1932 and January 1st, 1933.

[2] Average urban dwelling floor space for two persons.

[3] Assuming average monthly rent of worker's family (three persons) in Great Britain at 44/– and assuming that the family occupies 36 sq. metres of dwelling floor space (3 rooms plus landings, lobbies, bathroom, etc.) the monthly rent for 10 sq. metres is 12/–.

[4] Average weekly fares for worker's family of three persons is 1/–; the expenditure is low on account of wide use of bicycles.

[5] Average expenditure for family of four persons 4/– per week. The figure in the table is obtained by assuming as above 13 sq. metres average floor space per person.

also cover the reduced cost of the post office, train service, cheap theatre tickets and the like.

The estimated monthly wage of 52/6 is about the same as the average pre-war wage which is stated to have been 24 roubles=50/-. For incomes below the average, the value per rouble would be somewhat higher than for the average wage ; for incomes exceeding the average the value of the rouble is somewhat lower, this, however, is largely offset by the various benefits not included in the salary, such as those derived from private earnings or from privileges connected with higher official positions, like free motor cars, extra pay on official journeys and various similar items.[1]

The average monthly income of all state paid persons might, therefore, be estimated at 50—60 shillings, making a total of about £800 millions per annum for the whole of the 23 million state paid persons. Assuming the same average income for the 1½ million craftsmen of the *artels*, we have to add £55 millions for these. The total of £855 millions should not be simply added to the agricultural income estimated at £1,200 millions, since 2½ million state paid persons are engaged in agriculture. Allowing for this by a slight deduction, we estimate the national income, exclusive of savings which are included in the expenditure on heavy industrial products, at about £2,000 millions.

Supposing that the pre-war investment rate was 10 per cent. of the national income, the pre-war consumed income would be £2,100 millions (see above) minus £200 millions, *i.e.* £1,900 millions. The present income of the consumers appears higher than pre-war by less than the increase of population, but the difference lies well within the limits of error. Per head of the urban population (40 millions) the income is one of about £20 per year as against about £9 for the rural population. (The latter figure includes a deduction of 25 per cent. for the grain levy.) The relation of these estimated incomes happens to agree with the estimate of the State Planning Commission (1933) stating that peasants and collective farmers drawn into industry have raised their living standards by 150 to 200 per cent.

Consumption of Industrial Manufactured Commodities.

Ten shillings is the margin for the monthly expenditure of average state paid persons, which includes, besides a number of other

[1] In the " Torgsin " shops in which prices are on a gold basis the price level is about that of gold prices in England ; " coupons " of these shops are traded (illegally) at $\frac{1}{30}$ of their gold value.

items, all purchases of industrial manufactured commodities. Assuming for the moment that all of this sum is spent on such commodities we obtain £120 millions as a (very liberal) estimate for the total value of industrial manufactured goods consumed by the state paid population in towns (36 millions) and by the *artel* population (3 millions). In rural districts the retail trade turnover in 1933 is stated to have been 13 billion roubles. Assuming that all of this sum was spent on manufactured commodities, and taking the upper limit of the purchasing power for the rouble 10 roubles=2 shillings, the purchases by the rural population of manufactured goods would be £130 millions.

For the upper limit for the total quantity of industrial manufactured goods consumed by private persons in the U.S.S.R. we thus obtain £250 millions. To this must be added, if we want to assess the production of such goods, the provisions for the army, overalls provided by factories, paper consumed in offices and the like. The total production might be around £300 millions. This estimate is in harmony with the production figures of "light industries," clothing being mainly provided for by 2,300 million metres of cotton cloth.

Health Protection.

In the U.S.S.R. insurance providing for disablement and health protection is wholly paid by the state, thus forming an addition to the salaries. Considerable efforts have been made to improve the appalling health conditions of pre-war Russia. The number of doctors has increased from 20,000 (1913) to 76,000 in 1933. The number of hospital beds (exclusive of asylums) per 1,000 of the population has increased from 1·26 to 2·5. In the cities the increase is from 3·6 to 5·4, in rural parts from 0·4 to 1·2. These latter figures are, of course, still very low ; in Germany there are seven beds per 1,000 of the population, and 48,000 doctors for a population numbering 40 per cent. of that of the U.S.S.R.

But in this matter, more than anywhere else, it is the quality that counts. For obvious reasons no country can afford to nurse its sick at a standard high above the general level. The death-rate of the U.S.S.R. shows how poor are the effects of its health protection. From the age distribution curve for January 1st, 1931, we can see that the birth rate was still above 40 per 1,000. At the same time the population was increasing at the rate of 18 per 1,000, thus showing a crude death-rate of more than 22 per 1,000. No death-rate

in Europe reaches this figure, the next one being Rumania with 19·6 (crude death-rate of England and Wales, 12·3 for 1931). Considering the very favourable age distribution of the U.S.S.R. as compared with Western countries, the standardised death-rate must be more than twice as high as it is in these countries.

Education.

From 1920–21 till the beginning of the Five Years' Period in 1927–28 the number of schools for elementary and secondary teaching did not increase in the U.S.S.R. From 118,000 (1920–21) the number fell, reaching its lowest figure in 1923–24 at 90,000; the subsequent recovery brought the number back to 118,000 in 1927–28. Starting from this point a new effort was made, bringing up the number to 167,000 in 1932–33. In 1920–21 the number of pupils in elementary and secondary schools was 9·8 millions; in 1927–28 it had increased to 11·3 millions. Of these, 3·6 millions were in towns and 7·7 millions in rural parts. Subsequently, school children in towns increased to 4·9 millions, corresponding to about the increase in population, while in rural parts, the number almost doubled, from 7·7 millions to 14·6 millions.

Since the number of school children in 1932–33 is nearly equal to the total number of children of their age, we might describe the change by saying that, whilst at the beginning of the new period, only half of the children in the villages were attending school, subsequently about 30,000 new village schools were built and the other half of the children were also sent to school. The efficiency of this important work was certainly handicapped by the poverty of village conditions. A further serious disadvantage arose from the forcible introduction of various new teaching methods, which have recently been discarded and exposed to public derision by Soviet leaders.

Higher education has also been considerably developed. The number of students in universities and engineering colleges increased from 91,000 (1915) to 470,000 (1933), the latter figure being per head of the population somewhat higher than that of the western countries. In such matters, however, statistics only prove an effort, not an achievement. But no observer will fail to confirm that acting in the people of the U.S.S.R. there is a powerful will to learn. This is greatly encouraged by the Government providing for the maintenance of students and even more by paying much higher salaries for all work requiring a long training.

Heavy Industries.

Our review has shown us that the production of consumers' goods in U.S.S.R. is very much the same as it was twenty years ago. This is definitely not so with regard to the production of industrial raw materials and machinery. The following table shows the items which can be estimated by quantities, comparing the level of 1927–28, which was about the same as the pre-war level, with the production of 1934. An estimate of values is given in present prices.

HEAVY INDUSTRY IN 1934 AND IN 1927/28

	1934		1927/28	
		Value in million £[1]	Quantities in same units as for 1934.	Value in million £ at same prices as for 1934.
Coal (million tons) ...	92[2]	62·5	35·4	26·5
Oil „ „	25·6	73	11·7	33
Pig Iron „ „	10·4	22·3	3·3	7·5
Steel „ „	9·5	18·5	4·2	8·8
Rolled Steel (mill. tons).	7·0	19·3	3·7	10·1
Electricity (billion Kw.h.)	21	25·5	5·1	7·1
Copper (thousand tons)	53	1·8	28	0·9
Zinc „ „ ...	27	0·4	3	—
Tractors (in thousands)	93	14	—	—
Motor cars and trucks (in thousands) ...	72	16	—	—
		253		94

The table includes all the products of heavy industries, the value of which can be estimated with some accuracy. The value of the products not listed can be only roughly estimated judging by the price level at which the rouble values are given. From this evidence the upper limit for the total value of the heavy industries appears to be about £700 millions, of which £550 millions form the increment achieved since 1927–28.

[1]The following prices were assumed : Coal 15s. per ton, brown coal 3s. per ton, pig iron £3·4 per ton, steel £5·5 per ton, rolled steel £8·25 per ton, oil 57s. per ton (American price), copper £34 per ton. zinc £15 per ton ; 1 KW.h. = 0·3d. ; tractors and motor-cars were valued at British prices after consideration of the specification given in the official statistics. From the value of rolled steel a deduction was made of the value of an equal quantity of steel ; the value of an equivalent of pig iron was deduced from the value of steel ; from the value of pig iron a deduction was made for 19 million tons of coal, corresponding to the amount of coke (14 million tons) which is stated to have been used for iron-smelting. No deduction is made for the fuel used up in producing electricity.

[2]Of this about 11 million tons were brown coals.

Although this is a very considerable sum, it may seem only a small estimate for the result of that most impressive campaign of investment, carried on in the First Five Years' Plan. It may be noted, however, that the whole of the imported machinery invested in heavy industries since 1927–28, which, according to Soviet statements forms a considerable part of its new installations, was worth not more than £100 millions.

II

The Economic System

Planning.

Planned economy is a corollary of Communism. If everybody is to get his ration according to his needs and work according to his best abilities, then the State has to determine these needs and to secure their satisfaction by setting each worker to his task. As Stalin has pointed out, such a system of planning would be a task too vast to undertake for a long time yet. In fact, a system of planned economy has never been attempted in U.S.S.R. since the repeal of Communism in 1921. For one thing, as Stalin bluntly admits, there has never been a proper distributive system at all, and it is for this reason that he proposes to build up Soviet trading.

The First and Second Five Years' Plan are not systems of planned economy, but merely systems of planned production, and even this is an overstatement, for no great stress is laid on the systematic nature of the plan. Changes in the plans are frequent and are enthusiastically applauded if they extend the original programme of production. Any production exceeding the plan is acclaimed as a victory and is regarded as an offset to other productions falling short of the plan. Obviously an attempt at precise co-ordination is inconsistent with such an attitude. If a bridge is planned the "over-fulfilment" of one pillar does not compensate for the "under-fulfilment" of another. Whatever its various authors might have had in mind when setting it out, the First Five Years' Plan has actually been a campaign of production aiming at a series of loosely connected tasks and inspired by the resolution to storm forward, as far as possible, in the various directions set out by the campaign. This spirit is being modified in the course of the Second Five Years' Plan, by the attempt which is now being made to introduce effective marketing.

The Soviets claim that they have carried out the First Five Years' Plan. In doing so they pass over in silence the biggest item of their plan, namely the planned increase of agricultural production by 55 per cent. instead of which a very serious fall took place during the First Five Years' Period. The claim of having fulfilled (and even overfulfilled) the plan is mainly based on the results of the heavy industries. It is stated that the production of these industries calculated in fixed prices increased from 7 billion roubles (1928) to 20 billion roubles (1932) which is about 10 per cent. more than required by the plan.

FULFILMENT OF THE FIRST FIVE YEARS' PLAN

	Annual Production Figures.			Percentage Fulfilment of plan.
	1927/28	Planned Increase	Actual Increase.	
Coal in million tons	35	40	29	72
Pig iron in million tons	3·3	7·7	2·9	38
Steel in million tons	4·2	6·1	1·6	26
Rolled steel in million tons ...	3·4	4·6	0·8	18
Oil in million tons...	11·6	14·4	10·4	72
Electric power in billion KW.h.	5	20	8·4	42
Motor cars	0	250,000	24,000	10
Tractors	0	270,000	57,000	19
Copper, thousand tons	28	130	18	14
Housing : million sq. metres	185	42	22	52
Operating railway lines in thousand kilometres... ...	77	17	6·5	38
Superphosphate fertiliser thousand tons	260	3,100	250	8

Actually this statement is disproved by a comparison of the official figures of quantities produced in 1932 with the official plan figures, as given in the above table. The table contains most of the items of production which are summed up by the official publication on the Five Years' Plan as forming its most important parts, namely : " Twenty-two billion Kw.h. of electrical energy, 75 million tons of coal, 26 million tons of oil, 10 million tons of pig iron, 8 million tons of fertiliser, about 150,000 tractors and about 250,000 motor-cars, general machinery in value of 2 billion roubles, and agricultural machinery in value of 1 billion roubles." The table shows that coal mining and oil boring have been most successful,

the plan being fulfilled, to 72 per cent. In all other lines of production, more complicated than these, the results fall so much short of the plan as to indicate no effect of planning at all.[1]

In the light industries the Soviet statistics claim an increase of production value from 8·8 thousand millions (1928) to 16·3 thousand millions (1932) ; the increase being about 65 per cent. of the planned increase. So far as quantitative figures are to be found, *e.g.*, for textiles, they suggest that no considerable increase has taken place. Considering this fact, and considering also the figures for the heavy industries, as compared with the claims set out by the Soviet authorities in roubles at alleged fixed prices, we feel justified in setting aside altogether the claims to any planned achievements in the light industries during the First Five Years' Period.

Marketing.

In the course of the last four years the outline of an economic system has been developed by the Soviets, which is based on the principle of marketing. This system was inaugurated by Stalin's speech on June 23rd, 1931, in which three of the new principles were introduced : (1) Wages to be fixed so as to assure a sufficient supply of workers of required qualifications. (2) Enterprises to be conducted on a profitable basis. (3) Personal responsibility of business managers. In February, 1934, and in the following summer, these principles were further expanded : (*a*) Soviet trading in open shops was initiated ; (*b*) the personal responsibility of managers was further enforced so as to make each manager sole master of his business (" socialist ownership ") ; (*c*) local enterprises were made independent of the national government.

This system is called by Stalin (1931) " Socialism " as opposed to " Communism." In 1934 Stalin called his system the " first or socialistic phase of Communism," of which the " second phase " was not to be attempted for a long time. An attempt to introduce Communism (its second phase) is regarded as a " monstrosity " which is as violently suppressed in U.S.S.R. as in the Fascist countries.

As yet Stalin's Socialism is not a complete logical system of economy, but it seems possible to outline its tendencies towards such a system. Each person should try to make the best of his capacities so as to gain promotion and a higher income. Each business should use its resources so as to assure the best returns. Each consumer should buy at any shop the article he wants at the cheapest price at

[1] As may be seen from the table given on page 78 the figures of the First Five Years' Plan have now been reached for various important items.

which he can get it. This economic system of Socialism is in its mechanism almost identical with that of Capitalism, the main difference being that " ownership " is not transferable by private agreement since the Government appoints the " owners " (managers). In such a system enterprises must naturally become separate units under the effective control of managers who can make the best of local resources and local marketing ; nor does it seem compatible with centralised planning.

Actually the planning of local enterprises by the central government has become almost a formality in U.S.S.R. The local Soviets approach the central Planning Commission with various projects which they consider to be profitable. From these projects the Commission chooses a certain number which are thought to be sound and the local authorities are then provided with the money to start them and are held responsible for their success. The approved projects then appear in the national plan of the year. Thus the Commission actually undertakes, towards the local authorities, merely the functions of a financier to an entrepreneur.

A local enterprise is authorised to make investments up to a million roubles without asking for the approval of the Government, and it may make loans to *artels* of handicraftsmen to finance production for its own demands. The system can be best envisaged if we conceive of each private firm in a capitalist country being made into a limited company, the State holding the shares and appointing a manager to each enterprise.

While I feel convinced that no return to private ownership is possible in the U.S.S.R., it seems that public and collective management is developing on lines almost identical with those in the marketing system of Capitalism. The driving force in this direction is at each turn the recognition of the increased utility which arises when each economic unit strives for the most profitable activity as measured in market prices.

III

" Overtaking and Outstripping " the Capitalist Countries

Efficiency.

The urban population of the U.S.S.R. produces consumers' goods and services to the value of about £800 millions and in addition means of production worth about £700 millions. The total is less than one half of the British national income (£3,600 millions) for a

population which is only 15 per cent. smaller. Per capita the production of the urban population is less than one half of the production per capita of the British population. This estimate is even too high, since the great deficiency in quality has not been fully taken into account. The reason for this comparatively low level of productivity is partly due to the low standard of efficiency, much deplored by the Soviet authorities. In 1933, 76 million tons of coal, of which 9 million tons were brown coals, were mined by 400,000 workers. The German mines employed, in 1931, for the production of the same quantities, little more than 200,000 persons. The Soviet authorities were well aware of this lack of efficiency when setting out their plans. The tractor works, for example, were planned to use four times the labour per unit of production required in U.S.A.

Much of the inefficiency is put down to bad organisation. Kaganovitch describes as one of numerous examples the case of the "Red Dawn Knitted Goods Mills." "The Mills received (in 1933) nineteen different sets of instructions, every one of which contradicted the others. The plans were altered over and over again as follows: the output plan—seven times; productivity of labour plan—four times; cost of production—eight times. The plan for 1933 was finally endorsed on January 4th, 1934." It is with a view to remedying such a situation that it was decided to decentralise industry and to make the manager master of his enterprise.

Poverty.

In a country of great natural wealth inefficiency and poverty might be considered as synonymous. But "inefficiency" which is due to lack of roads, railways, machinery and houses is better regarded simply as poverty. The poverty in houses we have already noted. The poverty in railways is equally marked. The European parts of U.S.S.R. have 1·3 km. of railways per sq. kilometer. Thus, while the density of population in U.S.S.R. is 30 per cent. higher than that of the U.S.A. density, the railway system is less than one-third as dense as that of the U.S.A. (4·3 kilometers per sq. kilometer). The best part of the country, the Ukraine, has a density of population nearly equal to that of France, while its railway system is less than one-third in density. Moreover, all railways are in a very bad condition. The country is practically roadless, and millions of motor-cars would be of little use so long as this continues. Even more fatal than these deficiencies is the agricultural over-population. The sown area of the U.S.S.R. is about 320 million acres on which

are 25 million farmsteads. This gives about 13 acres to the farmstead. On the average 10 of these acres are growing grain, being about equally divided between wheat, rye, and oats ; half an acre is for growing potatoes. The average stock per farmstead is 0·8 cows, 0·5 swine.[1]

A comparison of the European territories of the U.S.S.R. with the U.S.A. shows best the position of Russian agriculture. The territory of U.S.A. is about 30 per cent. larger than that of European U.S.S.R., whilst the populations are about equal. In U.S.S.R. more than three-quarters of the population are engaged in agriculture ; In U.S.A. less than one quarter is thus engaged, and this one quarter provides a population four times its size with abundant agricultural produce of all kinds. Although the non-agricultural population, which is provided for by farmers in U.S.A., is thus 9—10 times as large as in U.S.S.R., and although the buying power of this section of the population is at least thirty times as large as the buying power of the non-agricultural population in U.S.S.R., the U.S.A. has a considerable surplus of wheat and cotton for exportation.

Overtaking and Outstripping.

This is the war-cry of the U.S.S.R., and as first steps towards its realisation three objects require accomplishment :

1. The addition of about 5 sq. metres of dwelling floor space per head of the population, *i.e.* 1,000 million sq. metres of floor space at a cost of £5,000 millions.
2. The construction of about 500,000 kilometers of railway together with equipment, at a cost of at least £5,000 millions.
3. The construction of about 1,000,000 kilometers of highways and some 30 million motor cars which together would cost another £5,000 millions.

After having spent the £15,000 millions an approach could be made to the main problem of what should happen to the agricultural population. At present the Soviet authorities are aiming at developing agriculture on an extensive scale after the model of Canada. Complete success in this aim would mean the production of the same amount of grain on about the same acreage, utilising at most only one twentieth of the present agricultural population. This raises the problem of the utilisation of the remainder of the population. By opening up Siberia and transferring most of the agricultural

[1] Including the animals owned by state farms and *Kolchoses*.

population to those parts the increase of arable land would be two- to three-fold. But what would be the use of a two- or three-fold grain crop? Already there is enough grain in the country, and certainly there is no way of selling some 100—200 million tons of grain at a profit on the world market.

Industrialisation appears to be the only way out and this is, in fact, the most prominent aim of the Soviets. Officially it is stated that the country is now industrialised up to 75 per cent., the next step being to industrialise it up to 80 per cent. These figures are, however, quite meaningless; they compare the respective production values at rouble prices fixed by the Soviet Government. To industrialise the country really means the transference of nearly 100 million people to non-agricultural occupations. In the past six years the Soviets have transferred about 10 millions and the effect has been an overcrowding of the towns to such an extent that they have had to be closed to all further immigration.

The past six years have added to the national production of about £2,200 millions a heavy industrial output of about £550 millions. The heavy losses suffered during this period in the deterioration of railways and destruction of live stock detract considerably from the value of this progress. But, accepting the increase at its face value, how far has it brought the country on its way of overtaking and outstripping? It does little to suggest when the £15,000 millions can be found for the reconstruction of housing and communication; and still less does it indicate how long it will be before the national income is brought to the £15—20,000, million which a population which will very soon number 200 millions should have when it overtakes such countries as Great Britain or the U.S.A. Owing to its size the U.S.S.R. might soon become a very powerful country, but it will remain a very poor country during the lifetime of any person who can remember the revolution of 1917.

IV

The Driving Force of the U.S.S.R.

Prospects for the Individual.

Every time I have stayed in the U.S.S.R. I have been impressed by the eagerness of spirit prevailing in the country, and a large number of other visitors from all classes whom I have met there have been equally struck by this driving force, though they may arrive at different judgments on its outcome. In attempting to

define this driving force I find that it has two main sources, the first of which is the hope of personal success which is disseminated in the population. Every worker feels sure of a job and hopes to get a much better job by working hard and improving his skill. While the average monthly wage on state farms and in the textile and food industries ranges from 100—110 roubles, the average wage of steel workers in the open-hearth departments is 750 roubles. Premiums are offered and given for good work to individuals and groups and the best workers (*udarniki*) enjoy valuable privileges.

The educational possibilities offered to the workers and their children open up a further path to promotion. Engineers and higher officials, successful doctors and scientists live on a moderately comfortable middle-class scale, their salaries ranging from 600—1,000 roubles, often being supplemented by extra income from private work and by additional benefits arising from their position in the way of lodgings, motor-cars, travelling and recreation. During my last visit to Moscow, two large and excellent new hotels were in the course of construction to receive officials coming on business from the provinces. Considering the average housing conditions prevailing in the U.S.S.R. such accommodation is very far above the ordinary level. Numerous goods, such as photographic cameras, wireless sets, bicycles, motor-cars, taxis and country houses are used or owned by successful persons who have managed to purchase them or who have received them as special gifts from the Government. Successful workers and officials are encouraged to make full use of these amenities and to enjoy life. Dances and theatres are crowded and the pleasures of good dressing and good food are looked upon as creditable attributes of the new " cultured " life.

I cannot here enlarge on the various accompaniments of this culture. The best of the sweeping changes is the casting away of extravagances of teaching methods, and the introduction of normal forms of school life, together with a curriculum approaching western requirements. The wide opportunities of promotion are naturally most accessible to the town dwellers. But though the ascent to the peaks of social life is more difficult to the peasant, the heights of these peaks must appear to him extremely dazzling and exciting. For him to become a factory worker of any class means a rise to almost three times his present level. Thus there is a pioneer spirit pervading the population, based on hope of personal success, and carrying with it the possibility of primitive enjoyments characteristic of pioneer communities.

The Social Outlook.

But there is another and more important side of this spirit to be considered. The great masses of workers and officials of the U.S.S.R. are not called upon to do any work for which they are not paid. Enthusiastic " counterplans " which attempt to excel in the required task have been discouraged as a nuisance. Stalin has by now firmly based the wage system on common sense. The marketing system is expanding further and might soon become the mainspring of most economic activities. As a real economic system develops in U.S.S.R. from the present conundrum of make-shifts it might become synonymous with Capitalism. But it would be carrying pragmatism much too far to consider synonyms as identities in social matters. When the one name of the State supersedes the million names of private firms the economic consciousness of all workers becomes unified under a common symbol. It is for this simple and materially almost unimportant fact that the U.S.S.R. is a different world from Capitalism. In the U.S.S.R. there is a complete inversion of responsibilities. While in Capitalism all good things grow by themselves and the state is called to responsibility only when things go wrong, the State is here made the fountain of all benefits and the population itself is execrated for all failures. State economy fills daily work with public emotion ; dictatorship so directs this emotion as to secure loyalty to the State even in the midst of a catastrophe. Under the Soviet system the capitalist relation between private and public motives is turned inside out. Whereas the avowed task of the private owner is self-seeking, and his implied social functions are out of sight, the Soviet ruler is overtly working for the public good only, and his personal ambitions remain behind the scenes. For these reasons the system in the U.S.S.R. is felt to be purposeful even though its actions are not particularly reasonable, and it is considered as social though its inequalities are striking.

But there still remains the major consideration, that this dictatorship is acclaimed as a liberation of the workers. The reason is that the workers draw greater spiritual advantage from the unification of economic consciousness, and suffer less serious losses by it than any other parts of the community. The emblem of the State, with which the workers associate themselves and which is stamped on all sign boards, is to them what the national flag was to the people of earlier days when it was spread out over all the blazons of the feudal lords. They are not owners of their factories any more than the British citizen is owner of the British Navy. But there are

owners to the same extent, and as such they can take pride in their factories as much as the British take pride in their Navy.

Mediæval craftsmanship, and later, pioneer business life, in which everybody was an owner or hoped to become one, have been two forms of economic consciousness to the workers. They have passed ; State management by a bureaucracy linked to the working class is a new and valid expression of economic consciousness for the workers : once more it gives a meaning to their labours. One of the tragedies of mankind seems to be that the most vivid forms of social consciousness are invariably destructive. If this destruction is to be avoided the community must be made conscious of purpose in its daily life by some other means than a social revolution. A way has to be found of clearing the sight of the citizens otherwise than by the smashing of a mechanism which they fail to comprehend.

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July 30th, 1935

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THE VALUATION PROBLEM IN PUBLIC UTILITY REGULATION IN THE UNITED STATES

I *The rise of " Valuation."*

SUBSTANTIVE control of the economic relations of public utility enterprises in the United States dates from the seventies of the last century, when State Legislatures began, under the so-called Granger laws, to limit railway rates. The railway companies had hitherto virtually been uncontrolled ; to fight against this restriction, they resorted to the Fourteenth Amendment of the United States Constitution. This Article, enacted after the Civil War for the specific purpose of checking injustices against negroes in the Southern States, provides that no State shall " deprive any person of life, liberty or property without due process of law, nor deny to any person within its jurisdiction the equal protection of the laws." The railway companies, claiming that the restrictions on their earnings violated the Fourteenth Amendment, contested the constitutionality of the Granger laws in the United States Supreme Court. At first the Court was not inclined to interfere, and took the view that the companies must look to the Legislatures for a remedy, but after 1880, as its personnel changed, the Supreme Court came around to say that the Legislatures could not fix rates so low as to deprive the companies of all profit. The first precise statement of the Court was in the case of Smyth *v.* Ames, 1898, in which certain railway companies in the State of Nebraska sought to have the rates fixed by the Nebraska Legislature declared void as depriving the companies of their property without due process of law.[1] The Supreme Court laid down :

(1) That a railroad is a person under the Fourteenth Amendment.

(2) That any regulation is confiscatory which deprives the undertaking of a return " under all the circumstances just to it and the public."

(3) That such regulation is primarily a matter for the State Legislatures, but " the question whether the rates are so unreasonably low as to deprive the carrier of its property without such

[1] A succint compilation of relevant quotations from this and other cases mentioned below will be found in Smith and Dowling, *Cases on Public Utilities*.

compensation as the Constitution secured, and therefore without due process of law, cannot be so conclusively determined by the Legislature of the State or by regulations adopted under its authority that the matter may not become the subject of judicial inquiry."

Smyth *v.* Ames definitely established that an undertaking subject to rate control was constitutionally entitled to a " fair return on fair value used and useful in the public service." This doctrine related initially to the prescription of railway rates by State Legislatures. But from 1907 the Legislatures began to create Public Service Commissions, to regulate the rates of the local utilities, and the right to a " fair return on fair value " was recognised to extend here. The utility companies could appeal under " due process " to the Supreme Court against rates which they claimed confiscatory. But what were " fair return " and " fair value " ? Smyth *v.* Ames created many problems : one of the greatest of these was "valuation," the determination of "fair value."

II *Fair Return and Fair Value.*

The term " fair " in these usages might be subject to any one of three interpretations. It might mean appropriate in relation to some concept of abstract justice—what *ought* to be rewarded to the owner of the property for the services he renders the public. It might refer to such return or value as would be in practice most expedient, or, concretely, as would tend to maximise output and minimise price in the long run. Or it might be conceived of as meaning simply that return or value which would be normal to competitive conditions.

This last case raises some difficult theoretical problems, which, while outside the scope of this article, should be noted in passing. It is arguable that in all cases of " natural monopoly " where there is a negatively inclined demand curve for the product of the individual firm, working under conditions of decreasing average costs, competitive equilibrium is unattainable, and that competitive norms are irrelevant and of no significance here.[1]

" Fair return " has been subject to curiously little attention. The Commissions have been inclined to adopt some figure between six and ten per cent., as a fair return on the property, and to maintain this figure from year to year. The Public Service Commission

[1]For discussion of these questions, see R. F. Fowler, *The Depreciation of Capital*, pp. 72—76.

of New York State, for example, adopted eight per cent. as fair return, from the beginning of its administration in 1907, and this rate has been maintained, with few exceptions, to the present time. This position seem analogous to that adopted by Parliament in relation to dividends of public utility companies in Great Britain during the last century. From year to year, and for companies economically very diversely situated, ten per cent. was regularly specified as the permissible statutory return on the capital stock. It is not clear in relation to which of the three criteria enumerated such a rigidly fixed return is determined as " fair." Its very rigidity in the face of conditions changing from year to year and differing from company to company suggests that it is based on some abstract conception of what is due to the proprietor. But the apparent uniformity conceals a multitude of variations. Since this rate of return is earnable on the whole " fair value " of the property, and a large part of the corresponding capitalisation may be in the form of fixed-interest bearing securities of some type, then the actual dividend paid on the common stock may be far in excess of the fair return awarded by the Commission. How great the difference may be will depend on the proportion of fixed-interest bearing securities included in the capitalisation, and the rates which have to be paid on those securities. What the common stock holder gets may show little correspondence to the fair return fixed by the Commission. Any such correspondence is further vitiated when (and, as is shown below, this is the dominant case) the " fair value " fixed by the Commission, on which the " fair return " may be earned, is appreciably different from the total of the company's securities issued.

Since the actual dividends paid may vary erratically from the " fair return," it is difficult to see on what principle of expediency, equally as upon what conception of justice, this " fair return " is determined. Nor is the question answered by resort to the third criterion—normality under competitive conditions. The difficulties encountered in relation to the other two are obviously relevant here. And further theoretical difficulties appear. Is it possible to speak of any single rate of return, generally normal to competitive conditions ? Perhaps it would be nearer reality to recognise that there are *two* normal rates for every industry,[1] or even for every industrial undertaking.

[1]See Joan Robinson, " What is Perfect Competition? ", QUARTERLY JOURNAL OF ECONOMICS, November, 1934.

The " fair return " of public utility control machinery appears to be fixed, in practice, at some conventional figure, and cannot be analysed in relation to economic theory. Even more baffling problems arise when " fair value " is examined from an economic standpoint.

Smyth *v.* Ames, establishing the utilities' right to a fair return on fair value, gave some indication of what was to be understood as determining fair value. Said the Court : " the basis of all calculations as to the reasonableness of rates to be charged . . . must be the fair value of the property being used . . . for the convenience of the public. And in order to ascertain that value, the original cost of construction, the amount expended in permanent improvements, the amount and market values of its bonds and stocks, the present, as compared with the original cost of construction, the probable earning capacity of the property under particular rates prescribed by statute, and the sum required to meet operating expenses, are all matters for consideration and are to be given such weight as may be just and right in each case. We do not say that there may not be other matters to be regarded in estimating a fair return upon the value of that which is employed for the public convenience. On the other hand, what the public is entitled to demand is that no more be exacted from it . . . than the services rendered are reasonably worth."

Such was the Smyth *v.* Ames " rule " given out from the Supreme Court, and taken by Public Service Commissions for guidance in fixing fair value. But this so-called rule is no rule at all ; rather is it a series of conundrums, omissions, confusions, and contradictions. No specific meaning can be attached to the last sentence quoted. The Court recognises that there " may be " other relevant matters, but at least one factor omitted—treatment of depreciation—is relevant to valuation in any established public utility. The introduction of " probable earning capacity " in the determination of fair value marks a gross confusion of thought—it is a clear case of circular argument, to fix fair value from rates earnable, when the end of fixing fair value is to determine rates earnable ! Yet, it may be remarked in passing, this particular confusion appears frequently in later utterances of the Court, and of certain Public Service Commissions. The great contradiction in the Smyth *v.* Ames rule was between " original cost of construction " and " the present as compared with the original cost of construction." When attention

is turned from the statement of the Court to the actual determinations of fair value by Court and Commissions, this is seen as the central issue round which controversy has in practice raged ; the valuation problem has mainly consisted in the choice between original and present cost as a base.

III *Present Cost.*

At this point it may be well to remark that the term valuation as used in relation to public utility regulation, is a misnomer. As ordinarily used, valuation refers to the process by which the exchange value of a piece of property is discovered, and the value discovered must be based primarily on the earning capacity of the property valued. But valuation in the public utility sense simply refers to some measure of cost, actual or potential, of a company's property, on which a fair return is due. There has been a tendency to substitute the term "rate base determination" for valuation, and in practice, the use of the latter term has led to confusion. In the case of McCardle *v.* Indianapolis Water Co., for example, Mr. Justice Butler said, "any reasonable man with a knowledge of this property . . . would unhesitatingly affirm that it has a value far in excess of the pipes, buildings, ground and machinery. Consider its earning power . . . an element that is actual and not speculative. It would be considered by a buyer or seller of the property . . . or of its securities." The sort of consideration mentioned here would be completely relevant if the problem in valuation were to assess the selling value of the property, but quite irrelevant to the process of determining the cost figure on which a fair return shall be earnable.

Smyth *v.* Ames gave no indication as to whether original or present cost was to be taken as the base for valuation ; in actuality, the choice was made, at that period, on grounds of elementary expediency. It was impossible to discover, in many cases, what the original cost of the property had been. Records were inadequate or absent ; figures of securities issued were frequently vitiated by stock-watering ; and any estimate of the actual cost might be falsified by wasteful construction methods. Since any figure cited as the original cost of the property was likely to be of very doubtful accuracy, it was natural that the regulating bodies should turn to present or reproduction cost as rate base. As compared with the elusive task of finding the original cost, it seemed a simple process, taking the property as it actually was, to find what the cost of reproducing it would be. And the regulating bodies were all the

more ready to adopt reproduction cost as rate base in the eighteen nineties, since there had been a steady fall of prices for twenty years, so that the reproduction cost figure would probably be appreciably below the original cost—such a method of fixing fair value would transfer quasi-rents from the utility investors to consumers.

It was on account of such considerations that reproduction cost came to be established as the base for valuation, at the end of the last century. In the years before the War, though other criteria were mentioned, reproduction cost was generally taken as rate base by Legislatures, Courts, and Commissions. After 1914, with the great rise of prices, a " split-inventory " method was introduced, by which existing property values were taken at reproduction cost, and new additions at actual cost. Since 1920, there has been a return to simple reproduction cost as rate base. In all the decisions which it has made on public utility valuations since the War, the Supreme Court has quite definitely adopted the present cost base. " It is the settled rule of this Court that the rate base is present value," has been the most categorical statement,[1] and State Commissions have had perforce to follow the Court's direction.

But the economic context in which present cost is employed has changed completely from the days of Smyth *v.* Ames, when that method of valuation was first imposed on the companies. Then, at the end of a long period of price fall, the gainers from the use of reproduction cost base were the consumers. But in this century, with its thirty years of rising prices, it has been to the utility stockholders that the benefit from reproduction cost valuation has accrued. Hence the rate base, originally introduced by the regulating bodies in the interests of consumers, came to find its strongest supporters among the utility executives.

Reproduction cost as the base of valuation may be examined in relation to the three criteria mentioned above. The claim is made that it is the only base which will secure justice (interpreted as a constant real return) to the common stockholder in the face of price rises. Evidently justice (in this sense) is not regarded as extending to the case of the bondholder. Moreover, since bonds and other fixed-return securities bulk large in the capitalisation of public utility companies, changes in present cost, recorded in the rate base, will produce a far wider fluctuation of the return on the common

[1] United Railways and Electric Company of Baltimore *v.* West *et al.*, 1930.

stock than the change in the price level. This in itself undermines the argument about keeping the real return on the stock constant; and the argument is further sapped by the simple consideration that changes in the construction costs of public utility plant will show little correspondence with changes in the costs of those things on which the common stockholder spends his income.

It is argued that present cost is preferable on the grounds of expediency—the need to maintain the credit of the utility companies' stock in the market. Actual investment as a base would mean that, in periods of price rise, since the return on public utility stocks would not rise with other stock returns, their credit would be impaired. Reproduction cost, on the other hand, would insure such a rise, and maintain the credit of the company. But, as is argued above, the fluctuation of return on common stock, under present cost base, may be very wide, and far in excess of the increase which might be required to maintain credit. In so far as the wide fluctuations take public utility securities into the class of speculative stocks, present cost base is likely to defeat, in the long run, the very end of maintaining utility credit. Incidentally, the wide changes in public utility stock returns, under present cost base, may have contributed, more than any other single factor, to bringing public utilities within the scope of holding companies—and here again, the long-run effect on their credit is at least doubtful. Reproduction cost may succeed in maintaining utility credit in periods of rising prices; in periods of falling prices, it is worse than useless in this direction. Original cost base will give the standard return, but under reproduction cost, the return on common stock may be extinguished completely. It has been argued that the present cost base will, in periods of falling prices, have to be abandoned precisely on those grounds of expediency on which it is advocated.

Reproduction cost base has been supported by analogy from competitive conditions, under which a normal return on present cost would tend to be earned. But, even if the analogy from competitive conditions be admitted as relevant and significant, the validity of this argument is subject to substantial qualification. Under competition, the relevant cost would be that of the most modern plant, embodying all technical improvements generally available, constructed under actual conditions, and without any surplus capacity, except necessary stand-by plant. But reproduction cost has always been interpreted as the cost of reproduction of the *existing* plant—reductions due to technical advance are eliminated. But this will

not square with the competitive hypothesis ; still less would the interpretation which some utility company representatives have attempted to give : cost of reproducing the existing plant at present prices under the original conditions—a "hybrid monstrosity" indeed !

It is difficult to find a satisfactory theoretical basis for reproduction cost valuation, as it has actually been interpreted. It might be concluded, then, that this rate base has been employed (as it was originally adopted) on grounds of practical advantages. But it has as many problems in practice as in theory. The whole concept is extremely vague. Is it the reproduction cost of the existing plant as operating ? Or does it include all surplus capacity, and all investments ever made, whether remunerative or not ? Is it cost at spot prices, or at average prices over some years ? Exactly what elements are to be included in the valuation—goodwill, and going value, for instance ? Is depreciation to be deducted from the rate base ? Accrued or realised ? Is land to be included at its original cost, or that cost plus "unearned increment" ? These are some of the significant problems in present cost rate base which have never been definitely settled. The result is that any valuation figure is of doubtful validity. "Every figure which we have set down with delusive exactness is speculative" admitted a member of the Supreme Court in a recent valuation case. This vagueness is reflected in the diverse estimates of reproduction cost which are made in valuations. The following estimates, for example, were made in fixing the rate base of the New York Telephone Company, in July, 1926 :

Majority of Commission	$366,915,493.
Statutory Court	$397,207,925.
Minority of Commission	$405,502,993.
Master's Report	$518,109,584.
Company (1)...	$528,753,738.
(2)	$615,000,000.

A further difficulty arises in the length of time taken to make such valuations. The New York Telephone case began with an application for increased rates from the Company in August, 1920 ; the valuations were not completed until July, 1926, and the case was still unsettled in 1930. If it is to take a decade to settle such cases, the usefulness of present cost valuation as a practical method of control will be small, since, by the time the award is made, the conditions which prompted the original application are likely to have changed substantially.

Perhaps the greatest practical difficulty associated with reproduction cost base is that it opens the way for a good deal of financial manipulation, largely on account of the vagueness of the concept. One great utility company, for example, admitted including in its valuation a figure of $7,781,000 as "franchise value"—which never represented a penny of investment. Another instance will show how valuation may be manipulated through individual small items. A company included $400 as present cost of a grass lawn in front of its offices. Actually the cost had been $100, in grass seed and labour, some years back, but it would have cost four times as much to "reproduce" the lawn immediately, by laying sods! There is obviously a wide scope opened up for manipulation when materials or methods of construction were employed in the plant, which are no longer made or used, and for which, therefore, only a guess can be made at present costs. These loopholes result in constant friction between the companies on the one side, and Commissions and consumers on the other. One result is that any move of the companies is suspect, and the most justifiable application for an increase of rates may meet with bitter opposition. It would seem at least a fair question whether the benefits which the companies have gained, and think they may gain, under present cost valuation are, in the long run, an adequate compensation for the deterioration in public relations which has resulted under that system. In any case, reproduction cost as a basis for valuation, despite its application in practice for thirty years, cannot be regarded as having provided a satisfactory solution to the problem of fair value.

IV *Original Cost.*

The alternative method of valuation consisted in taking the original or actual cost of the property as rate base. This was rejected when the valuation problem originally came up for solution because it was, as noted above, practically impossible to discover, in many cases, what the actual cost of the property had been. This difficulty was decisive thirty years ago, but with the development of the powers of the State Commissions, in the interim, bringing control over security issues, examination of actual investments, and inspection of records, the determination of actual investment, would in most cases be a much less formidable task to-day than it was in the days of Smyth *v.* Ames. Mr. Justice Brandeis, dissenting in the Southwestern Bell Telephone case (1922) argues that under

these changed conditions, original cost is entirely practicable as a method of valuation.

But original cost as rate base also presents a number of difficulties, theoretical and practical. There is some vagueness in this concept. Does original cost base mean including *all* investments whether made wisely or not? The term "prudent investment," often used synonymously with original cost suggests not, but where the original cost base has been employed, it has been the practice or Commissions to include *all* investments in the rate base—abandoned works, surplus capacity—except in so far as specific fraud is demonstrated. Is depreciation to be deducted from the original cost, and if so, accrued or realised? Allyn Young argued,[1] assuming that original cost base is taken, that depreciation should not be deducted in valuation. But if this is not done, will not the property be overvalued, as a result?

The original cost base may be studied in relation to the three interpretations put upon the term fair. In so far as, under the original cost base, the money return to the common stockholder would remain fixed in the face of changing prices, instead of varying to maintain a fixed real return, the original cost base would violate the canon of "justice." And, as the return would not rise in step with other stock return in price rise periods, original cost would not stand the expediency test, since the credit of the stock would show a relative fall. But, even if these social and economic defects are significant, original cost is not necessarily invalidated on that account. The necessary adjustment might be made quite simply and effectively by varying the rate of return allowed, in the face of a changing price level. Such a solution has never been employed in the United States—fair return, it has been indicated, has always been a curiously fixed rate. There are problems which arise when original investment is considered in relation to a hypothesis of competition which are not to be easily set aside. Under competitive conditions, normal rates are earned in the representative plant—that is, a modern plant, embodying all technical improvements generally available. Under dynamic conditions, therefore to allow a normal return on original cost must necessarily lead to economic waste. It has been argued[2] that under original cost, public utility rates will vary, as between different districts, where plants were

[1] Young, A. Depreciation and Rate Control," QUARTERLY JOURNAL OF ECONOMICS, August, 1914.

[2] Brown, H. G. "Railroad Valuation and Rate Regulation," 33. JOURNAL OF POLITICAL ECONOMY, pp. 505—530 (1925).

installed at periods of different price levels, in a way which does not represent actual economic differences ; hence industry, in so far as it is sensitive to differing public utility rates, will tend to be relocated in a way which will not be most economical. Such an argument is likely to be of greater theoretical than of practical significance, and in any case of doubtful importance in the long run. It is also arguable that, under original cost, construction work in public utility enterprises will be expanded in high price periods (in order to gain maximum addition to rate base) although the reverse would be socially desirable. But such an argument surely assumes that the utility executive take a very short view of the interests of the company. Are they not in practice likely to carry out construction, other things being equal, when they can get most for their investment—*i.e.*, in low price periods? A clearer argument against original cost is that, in periods of price fall, the consumers must pay a higher price than they would under reproduction cost, and are, in fact, giving a higher real return to the common stockholder. But it is questionable whether reproduction cost would work at all in periods of severe price fall. And any system under which, in such conditions, the return paid would correspond to what would obtain under competitive conditions, must necessarily conflict with ideas of justice to the common stockholder.

Original cost has its economic problems. But it has certain simple and telling merits. As compared with reproduction cost, involving repeated valuations by experts and wide scope for legal controversy, original cost is likely to be far less expensive as a method of control. In view of the fact that the present annual cost of public utility control in the United States mounts up to $200,000,000, this may be a very significant advantage. Original cost gives much less scope for financial manipulations than does present cost. This itself means a gain to the consumers, and the improvement of public relationships may increase the advantages of the method in the long run. And some of the difficulties associated with the original cost base may be short-circuited, if the rate of return is recognised as variable with changes in economic conditions. It is on such grounds as these that original cost has found wide support among Public Service Commissions, and has found a distinguished advocate in Mr. Justice Brandeis of the Supreme Court. Original cost raises many problems in theory and practice ; yet, if valuation is in fact an essential part of public utility regulation, it may well prove the most practicable method to adopt.

V *The Decline of Valuation.*

The reproduction cost base has been sanctioned by the Supreme Court, supported by utility executives, and practised by Commissions in fixing the fair value of public utility properties, during thirty years. But to-day its validity is coming to be more generally questioned. The Supreme Court has never been united in approving it. At each public utility valuation case, when the majority of the Court has prescribed reproduction cost, Mr. Justice Brandeis, usually supported by Justices Holmes and Stone, has presented a dissenting opinion, and this lead is being widely followed among administrators and students of public utility control. The Federal Government is reported as favouring the adoption of the original investment base.[1] Nor is reproduction cost as popular among utility executives in the post-1929 days of price fall and output decline, as it was in the years of rising prices and expansion. The utility managers feel that, under reproduction cost, they will not be able to obtain a return on their vast investments in the post-war decade (as late as 1930, $950,000,000 was spent on construction work by public utilities). And if, in interpreting reproduction cost, the Commissions refused allowance for existing surplus capacity, the plight of the companies would be worse. For these reasons, reproduction cost has tended to lose its advocates among utility executives, and they are coming to see that it may be to their interest to accept the original cost base.

But the questioning of reproduction cost base has not simply meant the rise of original cost ; there are clear signs that the whole method of valuation is being subject to inquiry. Is the determination of fair value fundamental to utility control ? The actual development of regulation in the United States from Smyth *v.* Ames has given it an important rôle, and in many quarters, it is still regarded as the great unsolved problem in public utility control. But in practice, some of the Commissions are no longer employing valuation at all. It is being avoided by one of two ways.

In the first place, in some States, regulation of rates is taking the form of a simple bargaining process between Commissions and companies. In order to extract favourable terms, the regulatory body may resort to some form of coercion. This is the explanation of many of the current threats of municipal competition, and probably of some phases of the activities of Federal power projects.

[1] *New York Herald Tribune*, December 10th, 1934.

Such methods evidently have little scope for any theory of valuation; but their efficacy as permanent methods of control seems dubious.

But the decline of valuation is seen in the development of a second method, which may prove of greater significance. In Great Britain, there has never been a valuation problem in fixing public utility rates. The statutory companies have been subject to rigid control of securities and investment. Parliament has prescribed the rates earnable on the *stock* of the company, since the paper figure is directly related to the actual investment in the company. This method is practicable where the public authority does exercise *de facto* control over the finances of the companies—a position which has not generally obtained in the United States. Where such control has been effective, regulation has been carried through on the English model. The best example is the Commonwealth of Massachusetts, where security issues and investments in public utilities have been subject to public control since 1870, and where, consequently, rate control has been exercised without any reference to valuation, and simply on the basis of giving a standard return on the equity. It is the contention of Mr. Justice Brandeis and other opponents of reproduction cost valuation, that this method of control could be widely extended by State Commissions to-day. Control of security issues, regulation of finances, prescription of accounting methods, and examination of accounts are powers widely exercised by State Commissions. It may well be that, in the future, regulation will be effected through such media, and valuation entirely abandoned.

At the present time, however, the problem of valuation remains a live problem in American public utility regulation, and is likely to be the subject of much more controversy before it is finally settled or abandoned.

PHILIP CHANTLER

Cambridge, Massachusetts
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W. S. JEVONS—A CENTENARY ESTIMATE

ONE hundred years have passed since the birth of W. Stanley Jevons. This centenary year seems to be an opportune time for a new evaluation of Jevons' contribution to economic theory in the light of modern experience with that subject. It is particularly fitting that such an estimate should be expressed through the medium of this journal, since Jevons was for several years the distinguished professor at the already distinguished Manchester School.[1]

In the years previous to the publication of Jevons' *Theory of Political Economy* (1871) English economic thought was dominated by the Classical tradition. Gossen and Cournot had yet to be discovered, Galiani and Condillac were forgotten. True, Bailey, Thornton, Rae, MacLeod and others had launched vigorous polemics against Classical doctrines, and the work of J. S. Mill himself contained pregnant hints and provocative statements. Perhaps the trend towards a psychological attack had begun. Nevertheless, something rather extraordinary was necessary to rescue English economic theory from the hold of the Classical school, and thus prevent retardation of progress. Jevons' *Theory* performed this function and tilted the methodological scales definitely in favour of a subjective approach.[2]

There can be little doubt as to the distinctly psychological nature of his starting point. " An examination of the nature and intensity of man's wants," he maintained, " shows that this connection between them gives to Political Economy its scientific basis."[3] Not that he identified himself with any particular system of psychology. While he believed that " it is surely obvious that

[1] Jevons was born in Liverpool in 1835. He was educated at University College, London, and in 1854 became an assayer of the Mint in Sydney. In 1863 he was appointed Lecturer at Owens College, Manchester, and, in 1866, Professor of Logic, Mental and Moral Philosophy. Between 1876 and 1880 he occupied a Chair at University College, London, and in 1882 his brilliant career was tragically cut short by drowning.

[2] Much of what is said in this article will be recognised to apply also to Menger and Walras. A detailed comparison of the three founders of modern economics, in respect to background, thought, and influence, would be most interesting ; but the present writer feels that such a comparison is beyond the scope of a paper of this sort.

[3] *Theory of Political Economy*, 4th ed., p. 42. (Henceforth referred to as *Op. cit.* 1.)

Economics does rest upon the laws of human enjoyment" he was well aware that these laws must be of the sort that can be easily and incontestably verified from everyday experience, and contended that "if these laws are developed by no other science, they must be developed by economists."[1]

A common criticism of Jevons' work is that, since it is based upon unqualified hedonism, his whole system must be rejected. This criticism is itself founded upon a misconception. It is true that Jevons described his theory as *the mechanics of utility and self-interest*,[2] and argued that "a true theory of economy can only be attained by going back to the great springs of human action—the feelings of pleasure and pain."[3] At first sight this appears to be a dangerous foundation for a science. Closer examination reveals that Jevons placed the very broadest of interpretations upon the hedonistic principle. For, he explained, "Call any motive which attracts us to a certain course of conduct pleasure, and any motive which deters us pain, and it becomes impossible to deny that all actions are governed by pleasure and pain."[4] Jevons' starting point was the axiom that, with freedom of choice, the individual always does the thing he wants to do.

Jevons did not introduce his novel point of view to his readers slowly and gently. He burst in without ado and announced in his preface that, "in this work I have attempted to treat Economy as a Calculus of Pleasure and Pain," and in his first chapter that "repeated reflection and inquiry have led me to the somewhat novel opinion, that *value depends entirely upon utility*." No doubt Jevons failed to explain thoroughly the function of cost variations in value determination. This oversight may well have been intentional. Less drastic treatment might have failed to accomplish his self-imposed task of delivering economic thought from the bonds of Classical tradition.[5]

[1] *Op. cit.* 1, p. 39.
[2] *Op. cit.*, 1, p. 21.
[3] *Op. cit.* 1, p. 304.
[4] *Op. cit.* 1, p. 304.
[5] Jevons' ideas did not meet with immediate approval. Marshall, who reviewed Jevons' book for The Academy, asserted that it was equally as one-sided as Ricardo's; and, no doubt disgruntled at seeing some of his own ideas on marginal utility already in print, grudgingly admitted that "The Theory of Political Economy . . . will have done good service, if it calls attention to the dangers of such parsimony." Cairnes was neither so kind nor so correct in his criticism. The only justification for employing a term like "utility" in a sense different from common usage, he protested, is the explanation of facts. "Now I must frankly say," he continued, "I have failed to find in Mr. Jevons' volume any justification of his doctrine." (*Principles of Economics*, Ch. 1.)

Jevons' method of attack, then, was the modern one of "psychological individualism." He pointed out that economic action is based upon *estimates* of utility, or *ideas* of satisfaction to be gained. "In the simple acts of barter . . . the whole thing is a question of direct estimation of utility. . . . It is with the direct personal estimates of utility that the economist starts."[1]

II

The subjective theory of value and exchange is at once Jevons' most important contribution to economics and the field in which he has been most subject to criticism. It was based entirely on utility, and choices determined by utility.[2] Amount of utility in the Jevonian sense means amount of satisfaction incurred at the *time of choice*, or estimated pleasure. He did not rule out the possibility of erroneous choices or mistaken estimates. He was careful to explain that utility is not an intrinsic quality in things themselves, but a certain relation of things to the pains and pleasures of mankind.[3]

Defining exchange as the substitution of a greater utility for a smaller, Jevons stated clearly and correctly the conditions necessary for exchange to take place. If u_1 be the utility of A's book to A, u_2 be the utility of A's book to B, v_1 the utility of B's book to A, and v_2 the utility of B's book to B, then, said Jevons, "the conditions of exchange are simply $v_1 > u_1$, and $u_2 > v_2$." Wicksteed restated exactly the same idea when he said that for exchange to take place, the relative marginal significance of the commodity received must exceed that of the commodity given up in the case of each party to the exchange.

At this point Jevons formulated his "law of diminishing utility." To provide a basis for this principle he appealed to physiological laws, stating that the strength of the response to any stimulus diminished with each repetition of that stimulus, and citing Jennings as his authority.[4] In this form the law is precise only when stated with

[1] *Principles of Economics*, p. 16. (Henceforth referred to as *Op. cit.* 2.)

[2] Jevons accepted Bentham's definition of utility. "By utility is meant that property in any object whereby it tends to produce benefit, advantage, pleasure, good, or happiness (all this in the present case comes to the same thing) or (what comes again to the same thing) to prevent the happening of mischief, pain, evil, or unhappiness, to the party whose interest is considered."

[3] In chapter one of his *Principles* Jevons declares that even "the revolver of the assassin has utility."

[4] Quoting Jennings, Jevons wrote "We may gaze upon an object until we can no longer discern it, listen until we can no longer hear, smell until the sense of odour is exhausted, taste until the object becomes nauseous, and touch until it becomes painful; if the average or temperate quantity of a commodity be increased, the satisfaction derived is increased in less degree, and ultimately ceases to be increased at all." *Op. cit.* 1, p. 56.

some reference to time. If a sufficient interval is allowed to elapse between successive applications of a stimulus, the response will be equally strong each time. Although Jevons had previously insisted that consumption must be treated as a rate, he apparently overlooked the time-element in this connection. The physical satisfaction of the third meal of a day may even exceed that derived from the first. The significant fact is that an individual would be willing to sacrifice less of other commodities for the third meal than for the first.[1]

The principle of diminishing utility is fundamentally sound, even if imperfectly stated by Jevons. It enabled him to proceed to the statement of equilibrium conditions, in which " the utilities of these increments must be equal in the case of each party," and exchange values are inversely proportional to " final degrees of utility."

Up to this point Jevons was discussing simple exchange, with stocks of commodities given. Final utility determines value only when the output is known. What determines the size of the output of a particular commodity? What determines value when commodities are produced under costs?

Jevons' answer was as follows :

Cost of production determines supply.
Supply determines final degree of utility.
Final degree of utility determines value.

There appears to be something slightly naive in this chain of causation. How can cost of production alone determine supply?

The author makes his meaning clear in his chapter on "The Theory of Labour." This theory is concisely stated in the summarising third appendix of the *Theory of Political Economy* : " labour . . . is always accompanied by a certain painful exertion, rapidly increasing as some function of the intensity and duration of labour. Thus, labour will be exerted both in intensity and duration until a further increment will be more painful than the increment of produce

[1]There are many cases where diminishing utility can be explained only by appeal to Menger's " dependent use " concept, which apparently did not occur to Jevons. A man may smoke one cigarette per day, and for the sake of his health smoke no more. A second cigarette has utility to him only as a gift for a friend, which use yields him less utility than smoking the first one. A third cigarette, given to a tramp, has still less utility. The satisfaction derived from the one cigarette he smokes himself will not have diminished, and may even have increased because he can now consume it with a clear conscience. The (marginal) utility of " cigarettes " has nevertheless decreased. That is, our man would make less sacrifice for each additional unit.

thereby obtained is pleasurable." He illustrated this theory diagrammatically, depicting equilibrium with the marginal utility of the product equal to the marginal disutility of obtaining it.

In this form the theory applies only to Crusoe economics, but a small modification would make it applicable to all conditions. If the diagram were used to depict equilibrium for the entrepreneur, it would be quite satisfactory except for the use of " feelings " as one of the co-ordinates. Or, if for " product " were substituted "wages," the theory would describe the process of equilibration for labour under all conditions. Jevons did not fully explain that, so far as economics is concerned, " pain " of labour consists of alternative uses of time and energy which are sacrificed, and need not be physiologically painful in equilibrium. The complete absence of a theory of production must be regarded as a deficiency in his system. Nevertheless, given his diagram showing production equilibrium and the objections to it, the transition to indifference curves is not difficult.

III

His isolated statements on the subject show that Jevons considered wages to be equal to the marginal productivity of labour in competitive equilibrium. He said that the reward for labour is $\frac{dx}{dt} \cdot \frac{du}{dx}$; which is true when the labourer receives his own product, or the utility equivalent thereof, or if x be interpreted as wages rather than product (u is utility, t is time). Perhaps his clearest formulation is in the following passage : " the wages of the working man are ultimately coincident with what he produces, after the deduction of rent, taxes, and the interest of capital." Since he showed rent to be the marginal product of land and interest to be the marginal product of capital, this statement can only mean that wages are equal to the marginal product of labour.

His theory of capital was one of the most important of Jevons' contributions to modern economics. He was one of the first to emphasise the fact that capital is essentially *time*, the means of lengthening the period of investment. His was a " static " theory in the Knightian sense. He started from the assumption of perfect foresight, and added to this the assumptions of preference for present consumption and of perfect competition. On this basis he demonstrated that the rate of interest is equal to the marginal productivity of lengthening the period of production. This rate is a " natural

rate," "the rate of increase of the produce divided by the whole produce." He showed that investment is a quantity of two dimensions, the amount of investment and the period for which the amount is invested. The basic features of the "Hayek triangle" and its elaborations are to be found in Jevons' "figure twelve," which shows that the amount of investment in agriculture increases for a period from tilling to reaping, and decreases as the product emerges and is consumed. The central idea of Taussig's *Wages and Capital*, the concept of capitalistic production as a flow of goods through various contemporaneously extant stages is also to be found in Jevons' chapters on capital. He made the important distinction between "free" and "invested" capital, pointing out that the dividing line was far from being definite or rigid. Indeed, most of the fundamental ideas of contemporary capital theory can be found in Jevons' work on the subject. If he neglected the "supply side" of capital theory, *i.e.*, savings (more or less eliminated by his static approach and his assumption of psychological discounting of the future), then he followed a practice that has but recently been abandoned.

Not inconsequential was the mathematical form in which much of Jevons' theories were expressed. His work began the rehabilitation of the mathematical method of economic analysis, more or less extinct since Cournot. We need not elaborate upon the tremendous contribution of this method to clearness and exactness, which have meant so much to modern economic theory. If his mathematics was of a simple type as compared with that of Walras, that was in itself an advantage, since it meant that his ideas were available to a wider range of readers, not yet accustomed to this form of expression in economic theory.

IV

The history of economic science, as well as its method, is one of "successive approximations." Jevons' work was an important advance over that of the Classical School, chiefly because the assumptions underlying his system of thought were more realistic than those necessary to a labour theory of value. His theory was imperfect, not because of any logical errors, but because some of his simplifying assumptions were still rather drastic.

Jevonian economic theory is most frequently attacked for its implication of measurable marginal utility, and its neglect of the interdependence of utility functions. These undesirable features are

not the result of inconsistency or short-sightedness on Jevons' part, but arise from his use of the assumption of constant utility of money, employed by Marshall with exactly the same effect.

In his introductory chapter, Jevons stressed the fact that feelings could be measured only by comparison with other feelings, and then could be measured only ordinally. Here is the basic idea which underlies Wicksteed's " relative scales." In the development of his theory, he abandoned both the relativity and the immeasurability of final utilities, which he knew to exist, in favour of a more simple analysis. He wrote : " The price of a commodity is the only test we have of the utility of the commodity to the purchaser ; and if we could tell exactly how much people reduce their consumption of each important article when prices rise, we could determine, at least approximately, the variation of the final degree of utility—the all-important element in economics."[1] In other words, if we knew the shape of the individual demand curve for a commodity, we could derive from it the marginal utility curve of that commodity. If the marginal utility of money is invariable, we can indeed do this, by merely selecting some arbitrary unit of utility to represent the marginal utility of money, and substituting it for money on the Y axis. It is this relationship of the subjective value of a commodity to the subjective value of money as the quantity of the commodity varies that Jevons' utility curves represent. They depict only the rate at which the marginal utility of a commodity relative to the (constant) marginal utility of money changes with variations in the amount of the commodity possessed or consumed. They apply to one individual only, and do not suggest that a unit of utility common to all persons could be found.

Given such curves, equilibrium for exchanges made through the medium of money is always determinate. Inter-relationships between the utility functions of commodities will exist, but they will be unimportant, and Jevons committed no logical error in treating the utility of each commodity as a function of its own supply only. Changes in relative marginal utilities can always be expressed as a change in the utility of the commodity whose supply is varying, since all utilities are expressed as a relation to the marginal utility of money, which is unchanging and represents " all other commodities." Of course, this assumption of the constant marginal utility of money

[1] *Op. cit.* 1, p. 147.

is highly unrealistic, and perhaps the greatest progress made by Pareto over Jevons was the dropping of this assumption.[1]

Jevons was not unaware of the interdependence of the demands for different commodities ; his assumption to the contrary was a purely formal one. He pointed out that " Whenever different commodities are (thus) applicable to the same purpose, their conditions of demand and exchange are not independent." He knew that in fact, a change in the price of a commodity which comprises a large proportion of real income will, by affecting the marginal utility of money, affect the price of all commodities. " When the price of bread rises much, the resources of poor persons are strained, money becomes scarcer to them, and . . . the utility of money, rises." In his detailed treatment of exchange, however, he preferred to overlook such relationships and simplify his analysis by means of the implicit assumption of the constant marginal utility of money.

Jevons followed the practice of all mathematical economists of assuming perfect divisibility of commodities. " The law of equalisation of final utilities," and the statement that in equilibrium prices must be inversely proportional to marginal utilities are dependent upon this assumption. Actually some purchases yield a greater surplus of satisfaction than do others, and because of technical or psychological indivisibilities further units are not bought for the purpose of equalising the satisfactions gained from all marginal expenditures. Jevons realised that his equations failed when such indivisibilities were admitted, and knew that his assumption placed his theories in the category of approximations. He was not only

[1]This point may be worth repeating in a different form. What Jevons said in effect was that $U = F(a) + \phi(b) + \theta(c) + \ldots + \lambda(n)$, ... (1) where U is total Utility, $a, b, c, \ldots n$ are commodities and $F, \phi, \theta, \ldots \lambda$ are the utility functions appropriate to the commodities.

This equation implies that in Pareto's equation (5), $I = f(\psi)$, (*Manuel*, p. 541) f is a unique function (ψ being of such a form that when in the equation $I = \psi(a, b, c \ldots n)$ I is assigned a given value, the equation represents an indifference curve). That being so the equation (1) holds under either of the following conditions.

(i) If $F(a)$, $\phi(b)$, $\theta(c)$, . . . $\lambda(n)$ are independent ; *i.e.*, if the utilities of $a, b, c \ldots n$ are functions of their own supply only. This was Jevons' position, made more tenable by the assumption of the constant marginal utility of money.

(ii) If $a, b, c \ldots n$, while technically dissimilar, are psychologically the same commodities and can be substituted for each other at constant rates (*e.g.*, if a represents " safety matches," $b, c \ldots n$ non-safety matches to the average (non-nervous) consumer). In this case the equation should be written $U = f(A)$, where A (the unified commodity) represents the commodities $a, b, c \ldots n$.

The reader is referred to Pareto, *Manuel*, pp. 539—544, and to Hicks and Allen, *A Reconsideration of the Theory of Value*, ECONOMICA, February and May, 1934.

aware of technical indivisibilities, but he had a concept very similar to Wicksteed's "minimum sensibile." He wrote "With every increase in the price of such a commodity, we ought, theoretically speaking, to find every person reducing his consumption by a small amount, according to some regular law. In reality, many persons would make no change at all; a few, probably, would go to the extent of dispensing with sugar altogether . . ."[1] The assumption of continuity was for Jevons a purely methodological device.

V

The work of W. S. Jevons then, was incomplete but not incorrect. With the possible exception of production and cost theory, all the bases of contemporary economics can be found in his writings on the subject. Subsequent development has been largely a matter of building upon his foundations, of dropping those assumptions which remove his theory from reality for the sake of manageability.

The assumption of perfect competition was very soon to be removed by Marshall. Pareto showed how a theory could be developed without resorting to the assumption of constant marginal utility of money. Frank Knight has more recently experimented with a theory that does not employ the assumption of perfect knowledge or foresight. Little has been done to develop an equilibrium theory that admits of indivisibilities, but this problem can perhaps be solved by including in the system one commodity which is "the marginal utility of not bothering about marginal utility." Much remains to be done in building up a capital theory which does not assume psychological discounting of the future. However, Jevons has pointed out the way towards a finished body of economic theory. We have only to follow his directions.

It is true that Menger and Walras covered much the same ground as Jevons, that J. B. Clarke and Marshall were already working in a similar direction when Jevons' *Theory* was published. Perhaps if Jevons had never lived, it would have meant only that English economics would have made slower progress. Yet in some respects Jevons' work was superior to that of Menger and Walras; and in any case his claim to priority is indisputable, since he presented his fundamental ideas in a paper read to the British Association in 1862.[2] It is but right, therefore, to acclaim Jevons as "The Founder of Modern Economics."

[1] *Op. cit.* 1, p. 15.
[2] Cf. Volta: *La Teoria del Valore Economico,*" Ch. 1.

B. H. Higgins

THE AMERICAN CONSTITUTIONAL SYSTEM

THERE are many treatises on the American Constitution, but, oddly enough, Mr. Mathews is justified in saying that there was no book altogether suitable for a university text. He has struck a happy mean. The student will find in *The American Constitutional System*[1] a well-proportioned exposition of the governmental framework of the United States, and enough discussion of the points of doubt and difficulty to equip him with confidence on the one hand and scholarly humility on the other. It was, however, an omission not to include a bibliography to guide the student to the wealth of material nearly a hundred and fifty years of commentary have produced, material to which any student must inevitably be drawn if he has a real curiosity about constitutional principles and practice.

An Appendix of twelve pages contains that remarkable document The Constitution of the United States of America, which came into operation on March 4th, 1789. With twenty-one Amendments only that document is still the instrument of American Government. It is the oldest existing written constitution of a sovereign state. Under it there exists to-day a system of administration more elaborate than any other in the world. The founders of the Constitution could not have imagined the ramifications of government that have come into existence under the provisions of the document they drafted.

It is a commonplace among students of constitutional law that in the United States, if anywhere in the world, the term, " unconstitutional " has a clear legal meaning. The Constitution of the United States embodied the principle of the separation of powers and provided, by Article I, for the constitution and powers of a legislature, the Congress ; by Article II, for an executive, the President ; and by Article III, for a judiciary, the Supreme Court. The Supreme Court thus established has frequently, since 1803, in effect declared laws passed by Congress, and assented to by the President, unconstitutional, and has become the final interpreter and guardian of the

[1] THE AMERICAN CONSTITUTIONAL SYSTEM by John Mabry Mathews, Ph.D., Professor of Political Science, University of Illinois, 468 pp., 24s. net. McGraw-Hill Publishing Co. Ltd., London.

Constitution, *vis-à-vis*, not only the States, but also the other two branches of the Federal Government. This power was not expressly granted to the Supreme Court by the Constitution but is now well established. Therefore, it may be said intelligently, and in a legal sense, that a law whether Federal or State is " unconstitutional " when the Supreme Court of the United States has so decided.

This commonplace, however, is misleading. One might suppose, and most people probably do, that in the United States that term is normally used in that strict and legal sense, whereas in England, as Dicey has pointed out in the case of legislation by Parliament, " the expression means simply that the Act in question is, in the opinion of the speaker, opposed to the spirit of the English constitution." The matter is not so simple and the difference in common usage by no means so clear. It is one of the political defects of the American constitutional system that all members and agents of the Federal government must swear to uphold and defend the Constitution. Does this mean, then, that the President and every member of the Cabinet, and of Congress, must be his own constitutional lawyer? Must he, with the aid of a treatise such as this of Mr. Mathews which, if the need really exists, he would be by no means ill-advised to use, decide whether upon the true construction of the Constitution which he has sworn to uphold he may properly support the passage of a Bill, or give it his assent, or execute it, or uphold its provisions? What confusion and delay is implicit in this multitude of " lawyers " ! Dicey says the term " unconstitutional " applied to an Act of Congress, " does not in this case necessarily import any censure whatever. An American might, without any inconsistency, say that an Act of Congress was a good law, that is, a law calculated in his opinion to benefit the country, but that, unfortunately, it was ' unconstitutional,' that is to say, *ultra vires* and void." That may be so, but the truth of the matter is that in the United States, as in England, " unconstitutional " has a political rather than a legal significance in ordinary use. Under the Constitution every party fights. Policies poles apart are advocated under the same flag. Everyone has at his disposal the damning criticism, " unconstitutional " to apply to his opponent's proposals. Each can call the other apostate and forsworn, and the more effectively because the word is coloured with a strictly legal meaning. Thus, in 1928, President Coolidge could charge his Congress with " a larceny of power " for proposing " unconstitutional " policies of farm relief and federal exploitation of electric power at Muscle Shoals. He did not mean that those Acts of Congress

would, in his opinion, be necessarily held unconstitutional by the Supreme Court. At best he meant that as *he* understood the Constitution, those Acts were *ultra vires.* In fact, he meant that he thought them inexpedient. Then, in 1933, those two measures were dwarfed by his successor's "larceny of power," in sponsoring the most extensive delegation of authority to a President in the history of the United States. In short, allegiance to a written instrument of government has produced more confused thinking in the United States than all the mixture of races, languages and religions. This was, however, inevitable and, therefore, the greatest assurance of wise development is that as many people as possible should have an intelligent appreciation of constitutional principles and practice. It is not too much to say of Mr. Mathews's book, *The American Constitutional System*, that it deserves to achieve its avowed purpose of furnishing the general reader as well as the university student with a thorough, comprehensive text on the constitutional system of the United States, giving attention to both the legal and the governmental sides of the subject, and laying the emphasis on those main features and general principles which should be understood by all intelligent citizens and by all careful students of American public affairs.

In 1933, when Franklin D. Roosevelt took office as President of the United States, Congress sat for a hundred days. In that brief period Congress purported to vest in the President power to control all business and industry in the public interest, to regulate production, prices, wages, and hours of labour, to debase the currency, and in fact, to do almost anything he should think conducive to the nation's welfare. Congress in subsequent sessions has continued this spate of legislation and delegation. Chief among the legislative vehicles of this social and political revolution was the National Industrial Recovery Act, under which the President was given power to impose codes for the conduct of industry. The President made full use of this power and prescribed codes for a large part of the vast industrial organisation of the United States, and industry for a considerable period has been conducted under their terms. In fact, by N.I.R.A. and the multitude of other Acts of Congress, *e.g.*, the Agricultural Adjustment Act, the face of American industrialism was completely changed.. Until the beginning of this year, it might well have been asked what had become of the Constitution of the United States, a document which for nearly a century and a half had been the jealously guarded charter of States' rights and an obstacle, though

not always insuperable, to the extension of federal power. The " rugged individualism " which had been the pride of most Americans and the enemy of national social reform seemed suddenly to have disappeared from the scene, and policies which, so far as they had been conceived and canvassed a few years ago, were generally stigmatised as un-American and " unconstitutional " were being put into practice on a scale that was bewildering. Social reforms so laboriously and tortuously achieved in the past dwindled to comparative insignificance. The last word on the legality of this great extension of the Federal Government's power could only be said by the Supreme Court, and as that Court has always refused to give advisory opinions, following the English practice and confining itself to the decision of concrete cases brought before it, and as the normal processes of law are inevitably slow, it was not until this year that any substantial part of the " New Deal " came before the Supreme Court for review.

On January 7th, 1935, the Court by 8 to 1, held unconstitutional Section 9*c* of the N.I.R.A., which authorised the President to prohibit the transportation in interstate commerce of petroleum produced in excess of State quotas. The main reason was that the Act delegated legislative power to the President without laying down a standard by which the President should determine when to exercise the power. In other words, it infringed the constitutional principle of the separation of powers. This decision did not affect the remainder of the Statute.

On February 18th, 1935, the Court, by 5 to 4, upheld the measures taken by Congress and the President to establish a new currency system.

On May 6th, 1935, the Court, by 5 to 4, declared unconstitutional the Railroad Retirement Act establishing a compulsory retirement and pension system covering employes of all interstate railways. The Act was held to violate the Fifth Amendment to the Constitution which declares that private property may not be taken without due process of law, nor for public use without just compensation, and was held not to be a valid exercise of the power granted to Congress by the commerce clause, " to regulate commerce with foreign nations and among the several States, and with the Indian tribes." (Art. 1, VIII, cl. 3.)

On May 27th, 1935, the Court unanimously held invalid the President's act in removing a member of the Federal Trade Commission from office for a reason other than one of those specified in

the Statute. His act was an infringement of the principle of the separation of powers under which Congress is entitled to fix by legislation the term of office of a member of a quasi-legislative or quasi-judicial agency.

On May 27th, 1935, the Court unanimously held unconstitutional the Frazier-Lemke Act providing a five-year moratorium for farm mortgages. The Act resulted in taking private property without due process of law or just compensation in violation of the Fifth Amendment.

On May 27th, 1935, the Court unanimously held unconstitutional Section 3 of the N.I.R.A., under which the code-making power was expressed to be conferred on the President, and, in particular, the Live Poultry Code imposed by the President in purported exercise of that power. The reasons were (1) that the statute was void as an unconstitutional delegation of its legislative power by Congress, in that it did not define, or set any standard for codes of fair competition, and (2) that the provisions of the code in question did not constitute a valid exercise of the power of Congress to regulate interstate commerce, since the poultry business was not interstate commerce.

These decisions have made a large but undetermined part of Mr. Roosevelt's work suspect in law. Some of it, for example, the Securities Exchange Act, may stand under the taxing power of Congress which has always been benevolently construed by the Supreme Court. But the application of the interstate commerce clause and the principle of the separation of powers and the principle of the Tenth Amendment that " powers not delegated to the United States by the Constitution, nor prohibited by it to the States, are reserved to the States respectively, or to the people," leaves no option to Mr. Roosevelt and the people of the United States but constitutional amendment, if his policies are to be put fully and legally into effect.

At the present time, therefore, when the eyes and interest of the world are more constantly fixed on the United States of America than they have been for many years, a book which gives an exposition of the governmental system of that great republic is to be warmly welcomed, not merely in America ,but in British countries, and not merely by lawyers and politicians, but by those people everywhere who value informed and intelligent ideas on matters of great moment.

A. McDougall

REVIEWS

The Theory of Economic Development. By JOSEPH A. SCHUMPETER. Translated by REDVERS OPIE. (Harvard University Press London: Humphrey Milford. Pp. 255. 15s.)

ONE is glad that Professor Schumpeter's many English-speaking admirers are given this excellent translation of his famous book *Theorie der wirtschaftlichen Entwicklung*. As is well known, it is a work that not only makes, *per se*, a contribution of the first importance to the understanding of economic processes and the classification of phenomena, but also, most felicitously, opens up new lines of thought and challenges problems incidental to its main theme.

There are identified three ways or circumstances in which a "capitalist" economic system may operate. The uneventful, continuously repetitive—or all-but-repetitive—way of the "circular flow," in which enterprise finds no place and in which changes are small—or non-existent—and proceed, as it were, organically out of the well-known experience of the past. There is the way of development in which the economic system takes *advantage* of the continuously growing and ample body of knowledge, developing rapidly and discontinuously to opportunity, trying new combinations of factors and goods, altering experiences and upsetting calculations. Finally, in the world as we know it, development becomes discontinuous not only in respect of changes of technique and products ("add as many mail coaches as you please, you will never get a railway"), but in respect to time. Pushed ahead by the able and enterprising, development accelerates as business swarms into new and profitable positions, becomes quiescent with dislocation and indecision, to be pushed ahead once more when conditions become sufficiently settled (*i.e.*, approximate to the circular flow) to allow the confident estimation of further opportunities. By an analysis of these conditions is brought out the essential dissimilarity of the "circular flow" and an economy subject to business cycles, between the business man maintaining his position, and the entrepreneur

attaining it, between the profits of enterprise and the income of the business man, and between money as an instrument of exchange and as an instrument of development.

In the establishment of this self-contained theory of development are propounded certain curiosities of analysis. In the " circular flow " there is no interest for there can be no " under-estimation " of the value of future goods, nor can there be profit if there is competition, so that the value of output must be imputed in its entirety to the original factors of production. To-day, it is perhaps dangerous to pass an opinion upon theories of interest and capital, but surely this may safely be said : that Professor Schumpeter's assumptions are hardly stated with sufficient clarity to make his propositions either self-evident or evidently erroneous (certainly one would distrust one's judgment were the latter the case). These very elementary questions present themselves : Who owns capital goods in the circular flow ? Why do they acquiesce in their ownership ? Can the circular flow absorb additional factors without causing some discontinuity ? It is certain that this chapter contains sufficient material for a volume—even from one pen. It is equally evident that Professor Schumpeter's theory of development did not demand the banishment of interest from his " static state " or that the " circular flow " should be so purely repetitive—indeed in later chapters he appears to contrast development with a less purely " static " concept, without, however, modifying his original conclusion or calling attention to the possibility of modification. The contrast, however, remains a masterly example of method.

To divorce his views on the trade cycle from credit theories (development makes use of credit facilities and is not forced by them) he insists upon the probability after development of an automatic deflation as compared with the position before development, although, of course, full account is taken of the important secondary effects of credit creation. For our own part, we do not think it valuable, save for expository purposes, to approach monetary theory through pure economic theory, though that is not to infer there must be no meeting ground. Here, again, the conclusion is not necessary ; it may be regarded, if the reader wishes, as an adjunct calling attention to theoretical essentials. Finally, interest is a by-product, a tax upon profits, a money phenomenon, due solely to the fact that for development resources are necessary to tempt factors from the " circular flow," *i.e.*, their previous occupations. No more " realistic " theory of interest could be imagined, nor a

more ready guide to the confusion of current affairs. As Professor Schumpeter infers, "Why seek further?" though his defence of this position is by no means of this negative character. Should we feel that this, at any rate, is not the whole truth, the theory of development would still stand.

There can be few books in which one can enjoy at the same time so much agreement with the author and so great a challenge to the critical faculties.

J.S.

Economics in Practice. By A. C. PIGOU. (Macmillan. pp. 154. 4s. 6d.)

IT is a virtue of Professor Pigou that, when he makes his not infrequent appearances as a popular lecturer, he does not discard the profundity of thought which finds expression in his larger writings. Ample evidence of this fact is contained in the present book which consists of six lectures on topical subjects " designed to have interest for the general body of undergraduate students of economics." That the book will reach this audience may surely be taken for granted. One's ardent hope is that it will reach a wider public and so have the opportunity of convincing some of its members that an economist by profession, while keeping his thought on a high plane, is not thereby debarred from speaking to them in language that they can understand.

In the book, the lectures appear in the following sequence : An Economist's *Apologia*—Economy and Waste—The Balance of Trade—Inflation, Deflation and Reflation—State Action and Laisser-Faire—The Economics of Restrictions. As the first and fifth lectures are explanatory of the aim and attitude of the economist in his work, it might be suggested that they should be read together. The other lectures are analytical and expository and have the intention of clearing away the confusion and misunderstandings which cloud their subjects, and of enabling any judgments formed on them to have at least a rational basis. As may be expected, Professor Pigou does not seek to determine these judgments. In so far as he may influence them it will be by the compelling example of his own clarity of mind.

G.W.D.

The Theory of Money and Credit. By L. von Mises. Translated by H. E. Batson. Introduction by Lionel Robbins. (Cape. 18s. pp. 445.)

Originally published in 1912, it is from the second (1924) edition of Mises' *Theorie des Geldes und der Umlaufsmittel* that this English version is derived. Consequently, it presents itself to the English reader in two guises—as a book written before 1912, and as a contribution to present-day English literature on the subject of money. It is in the second form that this edition demands appraisal—in his foreword, Professor Robbins, the editor of the Bedford Series in which this work is the latest publication, writes, " it is hoped that the present publication will meet a real need among English-speaking students . . . it deals systematically with the chief propositions of the theory of money and credit. . . . " Despite this well-founded consideration, it is impossible to be unimpressed by the fact that this work was first published two years before the War. It deals with problems still unsettled and still very imperfectly appreciated ; it gives advice that is all the sounder for being proved by the events of the recent past ; it enunciates principles that we have paid dearly for having overlooked or denied ; it offered long ago a more forward-looking foundation for monetary theory than the version of the Quantity Theory so widely adopted in this country. A notable service would indeed have been done had this translation been issued in 1912, or even in 1924. Happily we, no less than a series of tragic events and mismanagements, can pay a sincere tribute to the author who so long ago could make so considerable—and in this country so neglected—a contribution to monetary theory.

Unfortunately, certain serious criticisms must in our opinion be levelled against this book. Even to-day, it attempts a task not hazarded by any other English work—to deal exhaustively with the theory of money. But in doing this it is discursive, and is led away from the path of systematic exposition by the call of controversy. While, on balance, this may have been advantageous in Germany in 1912, it is not necessarily so in this country also in 1934. As examples, one may cite the criticisms on pp. 155—161 of certain views of Wagner and Wieser, and the repeated sallies at the Etatists. It is hardly too much to say that the good things are hidden away, and sometimes spoiled, as a result of repeated assaults on opposed opinions, which must not merely be proved wrong, but extirpated root and branch. One suspects that controversy is guilty of what in

this country will generally be held errors in Professor Mises exposition. In any case, in this charitable country, the reader naturally reacts by picking equally pernickety holes in the arguments of the author. As a consequence one's attention is distracted and appreciation marred. Professor Mises is not a lenient critic ; and as a general rule, he does not try to pick out the elements of truth in views opposed to his own—though in our opinion there are many such elements—and if argument is insufficient he is willing to employ what, in a work of this character, can only be called rhetoric and ridicule. One is aware that this is not necessarily a criticism of Professor Mises. It is not difficult to see this book as a crusade against dangerous opinions. Etatism, for example, and consequently socialism, which at that time von Mises imperfectly understood (*cf.* pp. 82, 242), inflation, and the encroachment of the state on a liberal economy—these are the views with which he is most out of sympathy, and, perhaps, rightly. For they made much trouble not only in Germany but in other countries which escaped the full measure of retribution. But even the bogies of liberalism are subject to fashion and in a book whose subject matter is not new this is an important consideration. In any event, the qualities which make good polemic are very different from those which make a closely knit and happily assimilated theory. The nearer the author reached towards his goal of 1912 the further away is he from the advertised ideal of 1934.

Although it is vulnerability to broad criticism of this kind that we feel to be the more important defect of this work, in matters of detail, too, disagreement will be found. Indeed, points of minor criticism, which in their sum make up a considerable and very important total are very numerous. For example, it can hardly be claimed that the concept of the natural rate of interest fits harmoniously into a systematic treatment of monetary theory. As this part of the work stands, the natural rate is merely a name, adding nothing to the treatment of credit money, inflation and deflation. Finally, to give an indication of some of the grounds for criticism, one may present a few statements (out of many more of their kind) likely to call forth very different reactions.

" Whether fiat money has ever actually existed is, of course, another question, and one that cannot off-hand be answered affirmatively " (p. 61).

" The nominalists assert that the monetary unit . . . is not a concrete commodity unit that can be defined in suitable technical terms, but a nominal quantity of value about which nothing can be

said except that it is created by law. Without touching upon the vague and nebulous nature of this phraseology, which will not sustain a moment's criticism . . . let us simply ask : *What, then, were the mark, the franc, and the pound, before* 1914 ? Obviously, they were nothing but certain weights of gold " (p. 66).

" An increase in the purchasing power of money is disadvantageous to the debtor and advantageous to the creditor " (page 199).

" Inflationism is that monetary policy that seeks to increase the quantity of money (p. 219). That policy which aims at raising the objective exchange value of money is called . . . deflationism " (p. 231).

" In theoretical investigation there is only one meaning that can rationally be attached to . . . Inflation . . . a fall in the objective exchange value of money. . . . The theoretical value of our definition is not in the least reduced by the fact that we are not able to measure fluctuations in the objective exchange value of money " (p. 240).

" When governments do not think it necessary to accommodate their expenditure to their revenue and arrogate to themselves the right of making up the defect by issuing notes, their idealogy is merely a disguised absolutism " (p. 224).

" A bank may be said to be solvent when its assets are so constituted that a liquidation would necessarily result at least in a complete satisfaction of all its creditors. . . . Liquidity is a particular sort of solvency. . . . Every enterprise . . . that is liquid is also solvent, but not every undertaking that is solvent is also liquid " (p. 331).

" The increased productive activity that sets in when the banks start the policy of granting loans at less than the natural rate of interest at first causes the prices of production goods to rise while the prices of consumption goods, although they rise also, do so only in a moderate degree. . . . Thus the tendency towards a fall in the rate of interest on loans that originates in the policy of the banks is at first strengthened. But soon a counter-movement sets in : the prices of consumption goods rise, those of production goods fall. That is the rate of interest on loans rise again, it again approaches the natural rate." And " so long as this depreciation of money is going on, the rate of interest on loans must rise above the level that would be demanded and paid if the objective exchange-value of money remained unaltered " (pp. 362—363).

In conclusion, it must be said that Mr. Batson is very much to be thanked for having done so well so difficult a task. J.S.

The Economics of Imperfect Competition. By JOAN ROBINSON. (Macmillan. 18s.)

The Theory of Monopolistic Competition. By EDWARD CHAMBERLIN. (Harvard University Press. London : Humphrey Milford. 14s.)

ONE might expect to find many points of similarity between these two works. Both arise from the deficiency each author sees in value theory ; we see in both a revulsion from the too common assumption of pure (or perfect) competition. In both books equilibrium under competition is regarded as a limiting case, and is treated as being brought about by the same forces working in the same way as where monopoly prevails. Each author is impressed by the theoretical void revealed by Mr. Sraffa (though Professor Chamberlin has a claim to priority in anticipating not only Mrs. Robinson but Mr. Sraffa himself, for the basis of his present work was an unpublished doctoral dissertation). Both works employ a geometrical technique and both make use of the device called a " marginal receipts " curve by Professor Chamberlin and a " marginal revenue " curve by Mrs. Robinson. It is interesting to notice that neither makes reference to Edgeworth's use (in 1897) of the same device—*i.e.*, the first differential, with respect to output, of the receipts function. On the title of the subject, they fail to find agreement. To Professor Chamberlin, imperfect competition can arise either as a result of monopolistic control or from rigidities and lack of knowledge ; he, therefore, uses the term " monopolistic competition," while Mrs. Robinson is content with " imperfect competition."

In content the books differ more than in title. Professor Chamberlin analyses equilibrium, profits, output, size of firm and costs under monopolistic competition, discussing the inter-reactions between the behaviour and expectations of producers, and the consequences of " product variation " and the significance of selling costs (which he attempts to define, p. 123). Mrs. Robinson is concerned with quite different problems, with monopoly rather than " imperfectly " competitive conditions. In her analysis of the effects—upon output, distribution, " efficiency "—of simple and discriminating monopoly, she carries orthodox analysis probably as

far as plane geometry will allow, while to this end she makes use of concepts of industrial equilibrium, of rents, of productivity and so on that allow her to aim at precision.

Again, Professor Chamberlin presents his book as an introduction to the subject whose title he borrows. He poses the questions to be answered ; he classifies these questions ; he expounds the methods of treatment and makes provisional conclusions. (" The theory of monopolistic competition has not been carried beyond its beginning. The theory of value has been considered only in its most general terms. . . . " p. 176.) Mrs. Robinson's object is different : her book is full of the most minute and careful analysis ; she is not opening up a subject but closing it (or attempting to do so). Professor Chamberlin finds certain questions he wants answering, and by a variety of methods he illuminates his problems. Mrs. Robinson's work is rather an illustration of technique—her " apparatus " is capable of yielding certain results, so that the author, very justifiably, uses its possibilities to show the paces of her technique. The simplicity of the technique would be very easily upset, and, generally, despite the level of abstraction, Mrs. Robinson appears to be drawing away from rather than approaching an understanding of things as they are.

An adequate commentary upon the books would itself be a book. One criticism can be levelled against both works. When free entry is possible into an industry subject to monopolistic competition, monopoly profits are extinguished by a lowering of individual producers' demand curves—output and profits of each firm contracting together. We have, therefore, to imagine a certain passivity (indeed negligence) on the part of individual producers, who cling to a position of formal equilibrium (at which marginal costs= marginal receipts) while their trade is filched from them (pp. 104—105). Mrs. Robinson seems to be in general agreement on this point (pp. 92—95). The conclusion appears unduly formalised, and is reached by geometrical rather than economic analysis.

Both books are distinguished contributions to their subjects. Mrs. Robinson adds precision and clarity to the world of discriminating monopoly, and her study of monopsony, while formal, opens up an interesting field for inquiry. Professor Chamberlin makes a valuable contribution to an important subject, which demands further treatment.

J.S.

The Future of Monetary Policy ; a Report on International Monetary Problems by a Group of the Royal Institute of International Affairs. (Oxford University Press : Humphrey Milford, London. 1935. Pp. 219. 10s. 6d.)

FOR the time being, the future of monetary policy constitutes primarily a political problem. No doubt, expert economic opinion is not unanimous (this Report itself calls attention to minor disagreements among its signatories, and in paying tribute to Professor Robbins' assistance in discussion states that he " is unable to accept (its) general standpoint "). But in some measure even such disagreement is one of policy rather than of analysis. Especially is this so in connection with problems in the international sphere, and in relation to the immediate steps to be taken to alleviate the difficulties of fluctuating and controlled exchanges. It is apparent that the nations have forced themselves to adopt and defend policies their better judgment will condemn ; each has added to the weight of depression upon all ; each has helped in creating an *impasse* from which none can move. The problem to-day is essentially to achieve a goodwill that will be sufficient once more to make possible international action. In that task, the economists can do little or nothing to help. His assistance should be needed afterwards. This Report presents an admirable picture of how valuable that assistance may be. It summarises the problems that ultimately will have to be solved—and not, as at the present, shelved—and outlines the steps which the Group consider should be taken to provide solutions. Questions of internal monetary policy, of the future international standard and methods of regulating world prices, of the technique of domestic and international investments, of indebtedness and its liquidation in necessary cases—these are some of the major points that are most realistically discussed. There is material here for the agendas—and the advice—of many conferences. Economists may point with some pride to this report as an admirable example of unprejudiced and scientific thought. More is the pity that for some little time yet this Report seems destined to be neglected. J.S.

The Industrial Crisis. By K. E. EDGEWORTH. (Allen and Unwin. Pp. 207. 5s.)

The Trade Balance. By K. E. EDGEWORTH. (Allen and Unwin. Pp. 130. 3s. 6d.)

THESE two very readable books are an attempt to find some reason for the economic ills that periodically beset us. Colonel Edgeworth is

an engineer and he brings an engineer's mind to the solution of economic problems : he frequently draws an analogy between the problems of economics and those of engineering and arrives at conclusions which are daily becoming more orthodox.

In his first book, he ranges over a very wide field in his search for the causes of the crisis and in the course gives a broad description of the economic structure of the more civilised countries of the world. One finds the sad reflection that the economist does not deal with those commodities of known properties to which the engineer is accustomed. This work leaves one with the feeling that the author is of the opinion that, human nature being what it is, the crisis was inevitable, but that a little more perspicacity on the part of bankers, politicians and economists (in that order) might have made avoidable its worst features.

In the second book, Colonel Edgeworth moves from the general to the particular, for it is to the Trade Balance that he would bend his energies to prevent a recrudescence of the crisis. It is rightly maintained that under post-war conditions the Trade Balance was unable to show that flexibility that was necessary if friction were to be avoided. This was partly due to the rigidity imposed by gold after 1925. Yet there exist the dangers of continually fluctuating rates of exchange, and so the suggestion is made that we adopt what is termed a " Gold Rate." This rate is the rate by which the gold content of the unit of exchange may be varied. The author would limit variations to ·04 per cent. per week making a maximum of 2·08 per cent. per annum. This would avoid violent fluctuations in the rates of exchange while at the same time preventing the rigidity of gold from having the adverse effect on the Trade Balance which conditions subsequent to 1925 have shown to be in its power. In addition to the Gold Rate there would be the Bank Rate to control credit. Whereas he has no qualms about leaving the control of this latter rate in the hands of its present managers, he has some difficulty in his search for a board to control the Gold Rate, for past events have sadly shaken his belief in those to whom he would naturally have turned.

Colonel Edgeworth realises the very close connection between the Trade Balance and the Financial Balance and in connection with the latter he makes an interesting suggestion, which, he claims would do much to prevent the over-borrowing by new countries which has been so prevalent in the past. He suggests that the interest on such loans be repaid to the extent of one half in the

currency of the borrower and the other half in the currency of the lender. To the criticism that this would reduce the security to the lender, he would reply (rather inadequately) that even gold clauses do not make for absolute security. N.R.H.

Principles and Methods of Taxation. By G. ARMITAGE SMITH. Revised and Re-written by R. G. HAWTREY. Eleventh Edition. (Murray. 5s. pp. 236.)

IN its present form, this work is a comprehensive introduction to the study of public finance. Taxation is considered from three angles, which itself is a notable feat of compression and presentation in a book of this size : for an understanding of the subject some knowledge of public expenditure, the correlative of taxation, of the history of taxation and of taxation theory are all required, for a tax system is a function of all three factors. This presentation and Mr. Hawtrey's well-appreciated gifts of exposition must be considered the chief reasons for the resulting clarity. To complete the work are added chapters on governmental enterprise, national indebtedness, local taxation, and a summary of certain foreign systems.

One of the difficulties of dealing with questions of public finance is the diversity of views that may tenably be held on a number of subjects. Here, a course clear of these pitfalls is steered. Of the national debt and the capital levy, high taxation and protective tariffs, the treatment will not fan the fires of controversy. On the contrary, as might be expected, the reader will obtain a balanced appreciation of the important issues involved, and will be able to approach his own conclusions. Probably at no previous time has there been greater need for an intelligent popular appreciation of questions of public finance. At a time when governments are undertaking new or extended functions, and when public opinion is abetting or sympathising, it is important to contemplate the fiscal consequences involved, and to possess the ability and technique to assess their importance. Even to-day, the rather neglected study of public finance is evidently one of the more important branches of Economics, while for the future it holds the promise of demanding increasing consideration from the intelligent citizen no less than from the student. A book such as this, so well fitted for general reading, is something more than a clear and reliable introduction to an important and difficult subject.

PERIODICALS

SOCIAL RESEARCH

May, 1935. *The Rationale of Autarchy*, ALVIN JOHNSON. *Methods of Financing Unemployment Compensation*, GERHARD COLM. *Insurance or Relief*, FRIEDA WUNDERLICH. *Types and Potentialities of Economic Planning*, EDWARD HEIMANN. *On Political Parties*, MAX ASCOLI. *Ethics and the " Single Theory,"* PAUL KECSKEMÉTI. *On Imperfect Competition*, EMIL LEDERER. *New Literature on Money, Credit and Banking*, 1933—1935, FRITZ LEHMANN.

August, 1935. *Modern Tendencies in Public Utilities*, HANS STANDINGER. *The Problem of Financing Small and Intermediate Industries*, FRITZ LEHMANN. *Women's Work in Germany*, FRIEDA WUNDERLICH. *Federalism and Business Regulation*, ARNOLD BRECHT. *Some Problems in the Theory of Ethics*, MAX WERTHEIMER. *Max Weber's Political Ideas*, ALBERT SALOMON.